Under the Home

Fifth Grade
Math Workbook

Ray's New Intellectual Arithmetic (Lessons 20-68)
Ray's New Practical Arithmetic (Articles 83-169)
Ray's New Test Examples in Arithmetic (Articles 87-169)

Learn from the Masters

TABLE OF CONTENTS

LESSON 1

Name _____

PRACTICAL ARTICLE 83 Date _____

OBJECTIVE(S)

- Define terminology related to factoring
- Distinguish between prime numbers and composite numbers
- Identify common divisors, greatest common divisors, common multiples, and least common multiples

Directions: Children complete the following problems after studying the associated lesson.

1. Circle all of the factors of 27.

1	2	3	4	5	6
9	10	15	20	25	27

2. Circle the multiples of 5.

1	2	3	4	5	6
9	10	15	20	25	27

3. Circle the prime numbers.

2	3	4	5	6	7
10	11	16	17	21	23

4. Circle the composite numbers.

2	3	4	5	6	7
10	11	16	17	21	23

5. What is the greatest common divisor of 18 and 24? _____

6. What is the greatest common divisor of 27 and 63? _____

7. What is the least common multiple of 6 and 8? _____

8. What is the least common multiple of 9 and 12? _____

LESSON 2

Name _____

PRACTICAL ARTICLE 84 Date _____

OBJECTIVE(S)

- Identify prime numbers from 1 to 100
- Use the methodology specified in the lesson to identify prime numbers from 1 to 100

Directions: Instructors review the lesson with children. Children complete the following problems.

1. Circle the prime numbers between 1 and 32.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

2. Employ the methodology described in the rules of the lesson.

    1. In the space below, write the odd numbers in a series between 1 and 100
    2. After 3 erase every 3rd number.
    3. After 5 erase every 5th number.
    4. After 7 erase every 7th number.
    5. After 11 erase every 11th number.

LESSON 3

Name _____

PRACTICAL ARTICLE 85

Date _____

OBJECTIVE(S)

- Define factor, multiple, and composite number
- Find factors, multiples, and composite numbers

Directions: Instructors review the lesson with children. Children complete the following problems.

1. 3 is a factor of 12 and is contained in it _____ times.
2. _____ is a factor of 21 and is contained in it 7 times.
3. 6 is a factor of _____ and is contained in it 7 times.
4. 9 is a factor of 81 and is contained in it _____ times.
5. _____ is a factor of 90 and is contained in it 10 times.
6. _____ is a multiple of 7 an contains it 4 times.
7. 35 is a multiple of 5 and contains it _____ times.
8. 72 is a multiple of _____ and contains it 8 times.
9. _____ is a multiple of 3 and contains it 6 times.
10. 54 is a multiple of 9 and contains it _____ times.
11. 4 being a factor of _____ is a factor of 16, 24, 32, 40, and 48.
12. 5 being a factor of _____ is a factor of 20, 30, 40, 50, and 60.
13. 6 being a factor of _____ is a factor of 24, 36, 48, 60, and 72.
14. 7 being a factor of _____ is a factor of 28, 42, 56, 70, and 84.
15. 8 being a factor of _____ is a factor of 32, 48, 64, 80, and 96.
16. What is the composite number of 2, 3, and 7?
17. What is the composite number of 2, 5, and 7?
18. What is the composite number of 2, 3, and 11?

LESSON 4

Name _____

PRACTICAL ARTICLE 86 Date _____

OBJECTIVE(S)

- Review the concept of prime factors
- Resolve numbers into their prime factors

Directions: Instructors review the lesson with children. Children complete the following problems.

1. Circle the **prime numbers** between 33 and 64.

33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

2. List of **prime factors** of the following values.

a. 6 _____ b. 10 _____

c. 12 _____ d. 14 _____

e. 20 _____ f. 21 _____

g. 22 _____ h. 42 _____

i. 44 _____

LESSON 5

Name _____

PRACTICAL ARTICLE 87 Date _____

OBJECTIVE(S)

- Review the concept of prime factors
- Resolve numbers into their prime factors

Directions: Instructors review the lesson with children. Children complete the following problems. Resolve the following numbers into their **prime factors**.

1.	30 _____	16.	27 _____	31.	50 _____
2.	4 _____	17.	28 _____	32.	70 _____
3.	8 _____	18.	32 _____	33.	77 _____
4.	9 _____	19.	34 _____	34.	91 _____
5.	10 _____	20.	35 _____	35.	105 _____
6.	12 _____	21.	36 _____	36.	119 _____
7.	14 _____	22.	38 _____	37.	133 _____
8.	15 _____	23.	39 _____	38.	154 _____
9.	16 _____	24.	40 _____	39.	210 _____
10.	18 _____	25.	42 _____	40.	231 _____
11.	20 _____	26.	44 _____	41.	330 _____
12.	22 _____	27.	45 _____	42.	462 _____
13.	24 _____	28.	46 _____	43.	2310 _____
14.	25 _____	29.	48 _____		
15.	26 _____	30.	49 _____		

LESSON 6

Name _____

TEST ARTICLE 87 Date _____

OBJECTIVE(S)

- Review the concept of prime factors
- Resolve numbers into their prime factors

Directions: Instructors can use all or a selected subset of these problems as a review, to informally check for understanding, or as a formal test. If children do not show proficiency, review related concepts and retest. Resolve the following numbers into their **prime factors**.

1. 51 _____
2. 52 _____
3. 62 _____
4. 63 _____
5. 72 _____
6. 75 _____
7. 76 _____
8. 120 _____
9. 132 _____
10. 168 _____
11. 196 _____
12. 198 _____
13. 204 _____
14. 207 _____
15. 252 _____
16. 561 _____
17. 882 _____
18. 828 _____
19. 2662 _____
20. 3087 _____
21. 4356 _____

LESSON 7

Name _____

PRACTICAL ARTICLE 88 Date _____

OBJECTIVE(S)

- Resolve numbers into their prime factors
- Find the prime factors common to two or more numbers

Directions: Instructors review the lesson with children. Children complete the following problems. Find the **prime factors common** to the following numbers.

1. 30 and 42 _____
2. 60 and 90 _____
3. 56 and 88 _____
4. 72 and 84 _____
5. 54 and 90 _____
6. 81 and 108 _____
7. 80 and 100 _____
8. 84 and 126 _____
9. 52, 68, and 76 _____
10. 66, 78, and 102 _____
11. 63, 99, 117 _____
12. 50, 70, 110 _____
13. 45, 75, and 105 _____
14. 75, 125, and 175 _____
15. 42, 70, and 98 _____
16. 33, 55, 77, and 121 _____
17. 39, 65, 91, and 104 _____
18. 34, 51, 85, and 102 _____
19. 38, 57, 95, and 114 _____
20. 46, 69, 92, and 115 _____

LESSON 8

Name _____

TEST ARTICLE 88 Date _____

OBJECTIVE(S)

- Resolve numbers into their prime factors
- Find the prime factors common to two or more numbers

Directions: Instructors can use all or a selected subset of these problems as a review, to informally check for understanding, or as a formal test. If children do not show proficiency, review related concepts and retest. Find the **prime factors common** to the following numbers.

1. 60 and 80 _____
2. 90 and 120 _____
3. 80 and 120 _____
4. 135 and 180 _____
5. 126 and 210 _____
6. 324 and 432 _____
7. 324 and 594 _____
8. 264 and 638 _____
9. 462 and 819 _____
10. 385 and 595 _____
11. 363 and 1419 _____
12. 48, 72, and 84 _____
13. 78, 104, and 143 _____
14. 192, 252, and 348 _____
15. 64, 104, 144, and 376 _____
16. 135, 180, 210, and 375 _____
17. 144, 168, 192, and 240 _____
18. 117, 143, 286, and 390 _____
19. 126, 196, 238, and 266 _____
20. 187, 231, 275, and 308 _____
21. 147, 210, 315, and 364 _____
22. 384, 486, 324, and 510 _____

LESSON 9

Name _____

PRACTICAL ARTICLE 89 Date _____

OBJECTIVE(S)

- Find the prime factors common to two or more numbers
- Find the greatest common divisor of two or more numbers

Directions: Instructors review the lesson with children. Children complete the following problems. Find the **greatest common divisor** for each set of numbers.

1. 30, 42 _____
2. 16, 24, 40 _____
3. 24, 36, 60 _____
4. 36, 54, 90 _____
5. 50, 60, 100 _____
6. 54, 81, 108 _____
7. 60, 90, 120 _____
8. 32, 48, 80, 112 _____
9. 48, 72, 96, 120 _____
10. 72, 108, 144, 180 _____
11. 62, 93 _____
12. 78, 130 _____
13. 161, 253 _____
14. 247, 323 _____
15. 391, 697 _____
16. 2145, 3471 _____
17. 16571, 38363 _____
18. 72, 120, 132 _____
19. 75, 125, 165 _____
20. 64, 96, 112, 136 _____

LESSON 10

Name _____

TEST ARTICLE 89 Date _____

OBJECTIVE(S)

- Find the prime factors common to two or more numbers
- Find the greatest common divisor of two or more numbers

Directions: Instructors can use all or a selected subset of these problems as a review, to informally check for understanding, or as a formal test. If children do not show proficiency, review related concepts and retest. Find the **greatest common divisor** for each set of numbers.

1. 48, 84 _____
2. 40, 60, 90 _____
3. 117, 171 _____
4. 889, 560 _____
5. 124, 600 _____
6. 390, 702 _____
7. 392, 637 _____
8. 770, 891 _____
9. 873, 378 _____
10. 656, 1066 _____
11. 980, 2401 _____
12. 3003, 21000 _____
13. 1008, 1584 _____
14. 1296, 2304 _____
15. 16983 18574 _____
16. 243, 324, 432 _____
17. 56, 84, 126 _____
18. 80, 120, 180 _____
19. 468, 648, 864 _____
20. 675, 945, 1053 _____
21. 980, 2002, 15001 _____
22. 289, 391, 493 _____
23. 288, 387, 486 _____
24. 3375, 8205, 15000 _____
25. 81, 135, 450, 780 _____
26. 63, 144, 216, 297 _____
27. 1120, 960, 888, 666 _____

LESSON 11

Name _____

PRACTICAL ARTICLE 90 Date _____

OBJECTIVE(S)

- Find the least common multiple of two or more numbers

Directions: Instructors review the lesson with children, and write out the example. Children find the **least common multiple** for the following problems.

1. 4, 6, 9, 12 _____
2. 4, 6, 8 _____
3. 6, 9, 12 _____
4. 4, 8, 10 _____
5. 6, 10, 15 _____
6. 6, 8, 9, 12 _____
7. 10, 12, 15, 20 _____
8. 9, 15, 18, 30 _____
9. 12, 18, 27, 36 _____
10. 15, 25, 30, 50 _____
11. 14, 21, 30, 35 _____
12. 15, 20, 21, 28 _____
13. 20, 24, 28, 30 _____
14. 45, 30, 35, 42 _____
15. 36, 40, 45, 50 _____
16. 42, 56, 63 _____
17. 78, 104, 117 _____
18. 125, 150, 200 _____
19. 10, 24, 25, 32, 45 _____
20. 2, 3, 4, 5, 6, 7, 8, 9 _____
21. 16, 27, 42, 108 _____
22. 13, 29, 52, 87 _____
23. 120, 360, 144, 720, 72 _____

LESSON 12

Name _____

TEST ARTICLE 90

Date _____

OBJECTIVE(S)

- Find the least common multiple of two or more numbers

Directions: Instructors can use all or a selected subset of these problems as a review, to informally check for understanding, or as a formal test. If children do not show proficiency, review related concepts and retest. Find the **least common multiple** for the following problems.

1. 8, 12, 16, 20 _____
2. 9, 12, 16, 20 _____
3. 12, 16, 20, 24 _____
4. 16, 20, 25, 40 _____
5. 36, 42, 48, 54 _____
6. 24, 30, 42, 28 _____
7. 60, 66, 30, 36 _____
8. 21, 35, 55, 84 _____
9. 16, 18, 20, 22 _____
10. 16, 18, 20, 30 _____
11. 16, 18, 20, 24 _____
12. 18, 20, 24, 36 _____
13. 24, 54, 84, 144 _____
14. 121, 122 _____
15. 221, 323 _____
16. 169, 325 _____
17. 343, 735 _____
18. 150, 225, 375 _____
19. 100, 200, 300 _____
20. 14, 24, 44, 42 _____
21. 143, 175 _____
22. 143, 176 _____
23. 12, 16, 24, 36, 72 _____
24. 30, 36, 48, 64, 80 _____
25. 18, 26, 54, 78 _____
26. 576, 384, 288, 768, 256 _____
27. 8, 9, 10, 11, 12 _____
28. 45, 75, 81, 72, 54 _____
29. 245, 343, 441, 98 _____
30. 123, 205, 287, 246 _____

LESSON 13

Name _____

PRACTICAL ARTICLE 91 Date _____

OBJECTIVE(S)

- Solve cancellation problems

Directions: Instructors review the lesson with children. Children complete the following problems.

1. Cancel the factors common to both the dividend and divisor.
2. Divide the product of the factors remaining in the dividend by the product of the factors remaining in the divisor.
3. The result will be the quotient required.
4. How many barrels of molasses, at $13 a barrel, will pay for 13 barrels of flour, at $4 a barrel?

5. Multiply 17 by 18, and divide by 6.

6. In 15 times 8, how many times 4?

7. In 24 times 4, how many times 8?

8. In 37 times 15, how many times 5?

9. Multiply 36 by 40, and divide the product by 30 multiplied by 8.

10. In 36 times 5, how many times 15?

11. Multiply 42, 25, and 18 together, and divide the product by 21 * 15.

12. I sold 23 sheep, at $10 each, and was paid in hogs, at $5 each: how many did I receive?

13. How many yards of flannel, at 35 cents a yard, will pay for 15 yards of calico, at 14 cents?

14. What is the quotient of 21 * 11 * 6 * 26, divided by 13 * 3 * 14 * 2?

15. The factors of a dividend are 21, 15, 33, 8, 14, and 17; the divisors, 20, 34, 22 and 27: required the quotient.

16. I bought 21 kegs of nails of 95 pounds each, at 6 cents a pound; paid for them with pieces of muslin of 35 yards each, at 9 cents a yard: how many pieces of muslin did I give?

17. What is the quotient of 35 * 39 * 40 divided by 26 * 30 * 42?

LESSON 14

Name _____

TEST ARTICLE 91 Date _____

OBJECTIVE(S)

- Solve cancellation problems

Directions: Instructors can use all or a selected subset of these problems as a review, to informally check for understanding, or as a formal test. If children do not show proficiency, review related concepts and retest.

1. How often is 12 contained in 4 times 27?

2. Divide 18 * 21 by 14 * 9.

3. In 16 times 18 how many times 12? .

4. How often is 6 * 8 contained in 16 * 18?

5. How many score in 12 * 25?

6. How many flower-beds 4 feet long and 3 feet wide, can be made from a plat 36 feet long and 18 feet wide?

7. Divide 8 * 9 * 10 * 12 by 3 * 4 * 5 * 6.

8. Sold six dozen tumblers at 8 cents apiece, and spent the money for yarn at 18 cents a pound; how many pounds did I receive?

9. How many barrels of sugar, at $15 a barrel, will pay for 18 hogs, at $20 apiece?

10. Divide 18 * 20 * 24 * 32 by 27 * 16 * 40.

11. How many lots 5 feet square can be cut from a lot 30 feet square?

12. Divide 18 * 17 * 16 * 15 by 2 * 3 * 4 * 5 * 6.

13. A quantity of iron will make three hundred 30-lb. castings; how many 25-lb castings will it make?

14. Twenty reams of paper, of 20 quires each, and each quire 24 sheets, and each sheet making 24 pages, were made into books containing 160 pages each; how many dozen books would there be?

15. How many hundred blocks 3 in. long, 2 in. wide, and 1 in. thick, can be made from a block 5 ft. long, 3 ft. wide, and 5 in. thick?

LESSON 15

Name _____

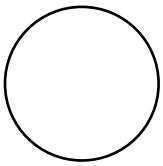
PRACTICAL ARTICLE 92 Date _____

OBJECTIVE(S)

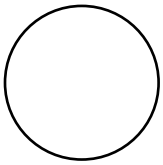
- Divide circles into fractions.

Directions: Instructors review the lesson with children. Children complete the following problems.

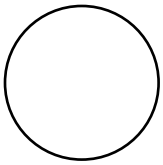
1. Divide the circle into two equal parts, each consisting of ½.



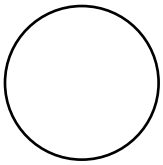
2. Divide the circle into three equal parts, each consisting of ⅓.



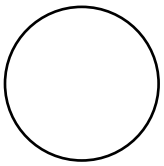
3. Divide the circle into 4 equal parts, each consisting of ¼.



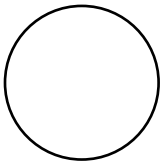
4. Divide the circle into 5 equal parts, each consisting of ⅕.



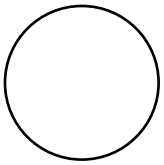
5. Divide the circle into 6 equal parts, each consisting of ⅙.



6. Divide the circle into 7 equal parts, each consisting of ⅐.



7. Divide the circle into 8 equal parts, each consisting of ⅛.



LESSON 16

Name _____

INTELLECTUAL LESSON 20 Date _____

OBJECTIVE(S)

- Understand the relationship between dividing an object into parts and fraction representations.

Directions: Instructors review the lesson with children. Children complete the following problems.

1. How many halves are in:
   a. 2 apples _____
   b. 3 apples _____
   c. 4 apples _____
   d. 5 apples _____
   e. 6 apples _____
   f. 7 apples _____
   g. 8 apples _____
   h. 9 apples _____
   i. 10 apples _____
2. How many thirds are in:
   a. 2 apples _____
   b. 3 apples _____
   c. 4 apples _____
   d. 5 apples _____
   e. 6 apples _____
   f. 7 apples _____
   g. 8 apples _____
   h. 9 apples _____
   i. 10 apples _____
3. How many fourths are in:
   a. 2 apples _____
   b. 3 apples _____
   c. 4 apples _____
   d. 5 apples _____
   e. 6 apples _____
   f. 7 apples _____
   g. 8 apples _____
   h. 9 apples _____
   i. 10 apples _____
4. How many fifths are in:
   a. 2 apples _____
   b. 3 apples _____
   c. 4 apples _____
   d. 5 apples _____
   e. 6 apples _____
   f. 7 apples _____
   g. 8 apples _____
   h. 9 apples _____
   i. 10 apples _____
5. How many sixths are in:
   a. 2 apples _____
   b. 3 apples _____
   c. 4 apples _____
   d. 5 apples _____
   e. 6 apples _____
   f. 7 apples _____
   g. 8 apples _____
   h. 9 apples _____
   i. 10 apples _____

6. How many sevenths are in:
    a. 2 apples _____
    b. 3 apples _____
    c. 4 apples _____
    d. 5 apples _____
    e. 6 apples _____
    f. 7 apples _____
    g. 8 apples _____
    h. 9 apples _____
    i. 10 apples _____
7. How many eighths are in:
    a. 2 apples _____
    b. 3 apples _____
    c. 4 apples _____
    d. 5 apples _____
    e. 6 apples _____
    f. 7 apples _____
    g. 8 apples _____
    h. 9 apples _____
    i. 10 apples _____
8. How many ninths are in:
    a. 2 apples _____
    b. 3 apples _____
    c. 4 apples _____
    d. 5 apples _____
    e. 6 apples _____
    f. 7 apples _____
    g. 8 apples _____
    h. 9 apples _____
    i. 10 apples _____
9. How many _____ are in 3 units:
    a. thirds _____
    b. fifths _____
    c. sevenths _____
    d. ninths _____
10. How many _____ are in 5 oranges:
    a. fourths _____
    b. eighths _____
    c. thirds _____
11. How many _____ are in 11 apples:
    a. sixths _____
    b. halves _____
    c. fifths _____
    d. ninths _____

LESSON 17

Name _____

PRACTICAL ARTICLE 93 Date _____

OBJECTIVE(S)

- Given parts of a whole, write the equivalent fraction representation.

Directions: Children complete the following problems. Express the fractions expressed in words below in figures.

1. One-half _____½_____
2. Two-halves _____
3. One-third _____
4. Two-thirds _____
5. One-fourth _____
6. Two-fourths _____
7. Three-fourths _____
8. Four-fourths _____
9. One-fifth _____
10. Two-fifths _____
11. Three-fifths _____
12. Four-fifths _____
13. Five-fifths _____
14. One-sixth _____
15. Two-sixths _____
16. Five-sixths _____
17. Six-sixths _____
18. One-eighth _____
19. Two-eighths _____
20. Seven-eighths _____
21. Eight-eights _____

LESSON 18

Name _____

PRACTICAL ARTICLE 94

Date _____

OBJECTIVE(S)

- Identify the numerator and denominator of a fraction

Directions: Circle either the numerator or denominator, as indicated.

1. Circle the numerator of the following fractions:

a. $\frac{1}{2}$ b. $\frac{1}{9}$

c. $\frac{1}{7}$ d. $\frac{2}{3}$

e. $\frac{3}{5}$ f. $\frac{7}{8}$

2. Circle the denominator of the following fractions:

a. $\frac{1}{2}$ b. $\frac{1}{9}$

c. $\frac{1}{7}$ d. $\frac{2}{3}$

e. $\frac{3}{5}$ f. $\frac{7}{8}$

LESSON 19

Name _____

PRACTICAL ARTICLE 95

Date _____

OBJECTIVE(S)

- Determine which of two fractions is greater given the same numerator but different denominators

Directions: Express the inequality between the fractions using the greater-than ">" and less-than "<" signs.

1. $\frac{1}{2}$ _____ $\frac{1}{4}$
2. $\frac{1}{6}$ _____ $\frac{1}{8}$
3. $\frac{1}{5}$ _____ $\frac{1}{3}$
4. $\frac{1}{2}$ _____ $\frac{1}{8}$
5. $\frac{1}{5}$ _____ $\frac{1}{7}$
6. $\frac{1}{3}$ _____ $\frac{1}{4}$
7. $\frac{1}{9}$ _____ $\frac{1}{5}$
8. $\frac{1}{7}$ _____ $\frac{1}{8}$
9. $\frac{1}{6}$ _____ $\frac{1}{2}$
10. $\frac{1}{8}$ _____ $\frac{1}{4}$

LESSON 20

Name _____

PRACTICAL ARTICLE 96 Date _____

OBJECTIVE(S)

- Divide a quantity among individuals into equivalent fractional amounts

Directions: Express the numerical fractional amount that each child will receive given the number of children and number of pieces of fruit.

1. 1 plum divided among 2 children _____½_____
2. 2 apples divided among 3 children _____
3. 3 oranges divided among 5 children _____
4. 7 bananas divided among 8 children _____
5. 1 pineapple divided among 8 children _____
6. 2 watermelons divided among 9 children _____
7. 6 cherries divided among 6 children _____
8. 4 kiwis divided among 9 children _____
9. 5 strawberries divided among 6 children _____
10. 8 papayas divided among 12 children _____

LESSON 21

Name _____

PRACTICAL ARTICLE 97 Date _____

OBJECTIVE(S)

- Express numerical fractions in word format
- Express whole numbers in numerical fraction form

1. ½ is equivalent to _____one_____ divided by _____two_____.
2. ⅓ is equivalent to _____ divided by _____.
3. ¼ is equivalent to _____ divided by _____.
4. ⅕ is equivalent to _____ divided by _____.
5. ⅐ is equivalent to _____ divided by _____.
6. ⅛ is equivalent to _____ divided by _____.
7. ⅑ is equivalent to _____ divided by _____.
8. Two is equivalent to _____2_____ / 1
9. Three is equivalent to _____ / 1
10. Four is equivalent to _____ / 1
11. Five is equivalent to _____ / 1
12. Eight is equivalent to _____ / 1
13. Ten is equivalent to _____ / 1
14. Twenty-one is equivalent to _____ / 1
15. One hundred and one is equivalent to _____ / 1

LESSON 22

Name _____

PRACTICAL ARTICLE 98 Date _____

OBJECTIVE(S)

- Determine whether fractions are greater than, less than, or equivalent to 1
- Identify proper fractions (<1), improper fractions (>=1), and mixed numbers

Directions: Express the inequality between the fractions and the value of one using the greater-than ">", less-than "<", and equal "=" signs.

1. $\frac{1}{3}$ _____ 1
2. $\frac{2}{3}$ _____ 1
3. $\frac{17}{12}$ _____ 1
4. $\frac{4}{3}$ _____ 1
5. $\frac{14}{14}$ _____ 1
6. $\frac{119}{119}$ _____ 1

Write whether each value is a proper fraction, an improper fraction, or a mixed number.

7. $\frac{2}{5}$ _____
8. $\frac{11}{12}$ _____
9. $\frac{10}{9}$ _____
10. $\frac{17}{3}$ _____
11. $2\frac{1}{3}$ _____
12. $55\frac{7}{8}$ _____

LESSON 23

Name _____

INTELLECTUAL LESSON 21 Date _____

OBJECTIVE(S)

- Write numerical fractions given the equivalent expressed in words

Directions: Write the following fractions

1. two-thirds _____
2. four-fifths _____
3. six-sevenths _____
4. eight-ninths _____
5. one-tenth _____
6. three-tenths _____
7. nine-tenths _____
8. seven-elevenths _____
9. five-twelfths _____
10. seven-thirteenths _____
11. nine-fourteenths _____
12. thirteen-fifteenths _____
13. one-sixteenth _____
14. two-seventeenths _____
15. five-eighteenths _____
16. six-nineteenths _____
17. seventeen-twentieths _____
18. twenty-seven thirty-firsts _____
19. thirty-four forty-thirds _____
20. twenty-nine fifty-sixths _____
21. forty-two sixty-sevenths _____
22. fifty-seven seventy-firsts _____
23. sixty-nine eighty-seconds _____
24. seventy-one ninety-eighths _____
25. eighty-five one-hundred-and-twenty-thirds _____

LESSON 24

Name _____

INTELLECTUAL LESSON 22 Date _____

OBJECTIVE(S)

- Solve word problems involving fractions

Directions: Solve the following word problems.

1. If a yard of tape is worth 2 cents, what is 1/2 of a yard worth? _____
2. If an apple is worth 3 cents, what is 1/3 of the apple worth? _____
3. A yard of cloth costs $6, what would 2/3 of a yard cost? _____
4. James had 4 apples and gave his brother 1/2 of them: how many did he give him? _____
5. If a melon is worth 8 cents, what are 3/4 of a melon worth? _____
6. If a barrel of flour costs $10, what is the cost of
    a. 2/5 of a barrel? _____
    b. Of 3/5? _____
    c. Of 4/5? _____
7. If a dozen eggs are worth 12 cents, what are 5/6 of a dozen worth? _____
8. What are 2/3 of 9? _____
9. What are 3/4 of 20? _____
10. What are
    a. 2/5 of 15? _____
    b. 3/5 of 20? _____
    c. 4/5 of 25? _____
11. What are
    a. 2/7 of 14? _____
    b. 3/7 of 21? _____
    c. 4/7 of 28? _____
    d. 5/7 of 35? _____
    e. 6/7 of 42? _____
12. What are
    a. 3/8 of 16? _____

b. 5/8 of 24? _____
c. 7/8 of 32? _____

13. What are
    a. 2/9 of 9? _____
    b. 4/9 of 18? _____
    c. 5/9 of 27? _____
    d. 7/9 of 36? _____
    e. 8/9 of 45? _____
14. What are
    a. 8/10 of 10? _____
    b. 7/10 of 20? _____
    c. 9/10 of 30? _____
15. What are
    a. 2/11 of 11? _____
    b. 3/11 of 22? _____
    c. 4/11 of 33? _____
    d. 5/11 of 44? _____
    e. 6/11 of 55? _____
    f. 7/11 of 66? _____
    g. 8/11 of 77 _____
16. What are
    a. 5/12 of 24? _____
    b. 7/12 of 36? _____
    c. 11/12 of 48? _____
17. If 2 apples cost 4 cents, what will 1 apple cost? _____
18. If 3 yards of cloth cost $9, what will 1 yard cost? _____
19. If 3 oranges are worth 15 cents, what are 2 oranges worth? _____
20. If 5 barrels of flour are sold for $30, what would three barrels sell for? _____
21. A grocer sells 7 pounds of sugar for 70 cents: what will he sell 5 pounds for? _____
22. A lady purchased 8 yards of calico for 72 cents; she afterward found that she needed 5 yards more of the same: how much did it cost? _____
23. A drover bought 12 calves for $120; he sold 7 of them for what they cost him: what did he get for them? _____

LESSON 25

Name _____

INTELLECTUAL LESSON 23 Date _____

OBJECTIVE(S)

- Solve word problems involving fractions

Directions: Solve the following word problems.

1. If an apple costs 2 cents, what part of the apple costs 1 cent? _____
2. A boy bought a pear for 3 cents: what part of the pear cost 1 cent? _____
3. If the price of a yard of cloth is $3, what part of a yard will cost $2? _____
4. If you buy an orange for 4 cents, what part of the orange costs 3 cents? _____
5. If a melon is worth 5 cents, what part of the melon is worth:
   a. 2 cents? _____
   b. 3 cents? _____
   c. 4 cents? _____
6. If a barrel of apples cost $6, what part of a barrel will cost $5? _____
7. James had 7 marbles and gave his brother 4 of them: what part did he give away? _____
8. A lady went shopping with $10; she spent $7: what part of her money did she spend? _____
9. If a bushel of clover seed cost $8, what part of a bushel can be bought for $5? _____
10. 5 is what part of 7? _____
11. 3 is what part
    a. Of 8? _____
    b. Of 10? _____
    c. Of 11? _____
    d. Of 20? _____

12. 4 is what part
    a. of 9? _____
    b. Of 11? _____
    c. Of 15? _____
    d. Of 25? _____
13. 5 is what part
    a. of 8? _____
    b. Of 9? _____
    c. Of 12? _____
    d. Of 16? _____
14. What part of 15 is
    a. 2? _____
    b. 7? _____
    c. 8? _____
    d. 11? _____
    e. 13? _____
15. What part of 20 is
    a. 3? _____
    b. 7? _____
    c. 11? _____
    d. 13? _____
    e. 17? _____
16. 3/5 of 30 is what part of 23? _____
17. 6/7 of 28 is what part of 35? _____
18. 2/3 of 21 is what part of 19? _____
19. 1/2 of 4 is what part of 1/3 of 9? _____
20. 3/4 of 12 is what part of 5/6 of 24. _____
21. 2/5 of 10 is what part of 3/7 of 21? _____
22. 3/8 of 16 is what part of 5/7 of 35? _____
23. 4/9 of 18 is what part of 3/11 of 77? _____
24. 9/10 of 30 is what part of 5/7 of 49? _____

LESSON 26

Name _____

INTELLECTUAL LESSON 24

Date _____

OBJECTIVE(S)

- Solve word problems involving fractions

Directions: Solve the following word problems.

1. If 1/2 an apple is worth 1 cent, what is the apple worth? _____
2. If 1/3 of an orange is worth 2 cents, what is the orange worth? _____
3. If 2/3 of a lemon are worth 6 cents, what is the lemon worth? _____
4. If 3/4 of a barrel of flour cost $9, what will a barrel cost? _____
5. If 2/5 of a pound of coffee cost 10 cents, what is the price of a pound? _____
6. If 4/5 of a pound of butter cost 12 cents, what will a pound cost? _____
7. If 5/6 of a gallon of wine cost 35 cents, what will a gallon cost? _____
8. 6 is 2/7 of what number? _____
9. 6 is
    a. 2/9 of what number? _____
    b. 2/11 of what number? _____
10. 12 is
    a. 3/4 of what number? _____
    b. 3/5 of what number? _____
    c. 3/7 of what number? _____
    d. 3/8 of what number? _____
    e. 3/10 of what number? _____
    f. 3/11 of what number? _____
11. 20 is
    a. 4/5 of what number? _____
    b. 4/7 of what number? _____
    c. 4/9 of what number? _____

d. 4/11 of what number? _____

12. 30 is
    a. 5/6 of what number? _____
    b. 5/7 of what number? _____
    c. 5/8 of what number? _____
    d. 5/9 of what number? _____
    e. 5/11 of what number? _____
    f. 5/12 of what number? _____
13. 42 is
    a. 6/7 of what number? _____
    b. 6/11 of what number? _____
14. 56 is
    a. 7/8 of what number? _____
    b. 7/9 of what number? _____
    c. 7/10 of what number? _____
15. 72 is
    a. 8/9 of what number? _____
    b. 8/11 of what number? _____
16. 90 is 9/10 of what number? _____
17. If you have 8 cents, and 3/4 of your money equals 2/3 of mine, how many cents have I? _____
18. William says to Frank: "Your age is 15 years, and 4/5 of your age is 3/4 of mine: what is my age?" _____
19. 5/6 of 18 are 3/5 of what number? _____
20. 6/7 of 14 are 3/8 of what number? _____
21. 5/8 of 16 are 2/7 of what number? _____
22. 2/9 of 27 are 3/10 of what number? _____
23. 5/9 of 36 are 4/11 of what number? _____
24. 7/10 of 20 are 2/11 of what number? _____
25. 3/11 of 55 are 5/12 of what number? _____

LESSON 27

Name _____

INTELLECTUAL LESSON 25 Date _____

OBJECTIVE(S)

- Solve word problems involving fractions

Directions: Solve the following word problems.

1. Divide 3 apples between 2 boys, giving to each the same amount. _____
2. A grocer gave 4 oranges to 3 boys, provided they would divide them equally: what was the share of each? _____
3. If 2 pears cost 5 cents, how much is that apiece? _____
4. If 3 yards of cloth cost $5, what is the price per yard? _____
5. Henry bought 4 pens for 5 cents: what was the cost of each? _____
6. 1/5 of 6 = what? _____
7. = what?
   a. 1/2 of 7 _____
   b. 1/3 of 7 _____
   c. 1/4 of 7 _____
   d. 1/5 of 7 _____
   e. 1/6 of 7 _____
8. = what?
   a. 1/3 of 8 _____
   b. 1/5 of 8 _____
   c. 1/7 of 8 _____
9. = what?
   a. 1/2 of 9 _____
   b. 1/4 of 9 _____
   c. 1/5 of 9 _____
   d. 1/7 of 9 _____
   e. 1/8 of 9 _____

10. = what?
    a. 1/3 of 10 _____
    b. 1/7 of 10 _____
    c. 1/9 of 10 _____
11. = what?
    a. 1/2 of 11 _____
    b. 1/3 of 11 _____
    c. 1/4 of 11 _____
    d. 1/5 of 11 _____
    e. 1/6 of 11 _____
    f. 1/7 of 11 _____
    g. 1/8 of 11 _____
    h. 1/9 of 11 _____
    i. 1/10 of 11 _____
12. = what?
    a. 1/5 of 12 _____
    b. 1/7 of 12 _____
    c. 1/11 of 12 _____
13. For 5 cents, how many apples can I buy at 2 cents each? _____
14. At $3 a yard, how many yards of cloth can be purchased for $7? _____
15. Harriet spent 13 cents for braid, at 4 cents a yard, how many yards did she buy? _____
16. When milk is worth 5 cents a pint, how many pints can you get for 17 cents? _____
17. For $23, how much flour can be bought at $6 a barrel? _____
18. A lady spent 25 cents for ribbon, at 7 cents a yard, how many yards did she buy? _____
19. How many times 2 is 13? _____

20. How many times
    a. 2 is 15 _____
    b. 2 is 17 _____
    c. 2 is 19 _____
    d. 2 is 21 _____
    e. 2 is 23 _____
21. How many times
    a. 3 is 20 _____
    b. 3 is 26 _____
    c. 3 is 29 _____
    d. 3 is 31 _____
    e. 3 is 35 _____
22. How many times
    a. 4 is 27 _____
    b. 4 is 33 _____
    c. 4 is 39 _____
    d. 4 is 41 _____
    e. 4 is 47 _____
23. How many times
    a. 6 is 43 _____
    b. 6 is 47 _____
    c. 6 is 49 _____
    d. 6 is 59 _____
    e. 6 is 61 _____
24. How many times
    a. 7 is 24 _____
    b. 7 is 32 _____
    c. 7 is 40 _____
    d. 7 is 48 _____
    e. 7 is 57 _____

25. How many times
    a. 8 is 45 _____
    b. 8 is 55 _____
    c. 8 is 67 _____
    d. 8 is 71 _____
    e. 8 is 81 _____
26. How many times
    a. 9 is 34 _____
    b. 9 is 38 _____
    c. 9 is 50 _____
    d. 9 is 58 _____
    e. 9 is 64 _____
27. How many times
    a. 10 is 63 _____
    b. 10 is 69 _____
    c. 10 is 77 _____
    d. 10 is 83 _____
    e. 10 is 91 _____
28. How many times
    a. 11 is 42 _____
    b. 11 is 46 _____
    c. 11 is 54 _____
    d. 11 is 60 _____
    e. 11 is 70 _____
29. How many times
    a. 12 is 68 _____
    b. 12 is 79 _____
    c. 12 is 85 _____
    d. 12 is 89 _____
    e. 12 is 95 _____

LESSON 28

Name _____

INTELLECTUAL LESSON 26 Date _____

OBJECTIVE(S)

- Solve a variety of problems involving column addition, practicing adding two columns at once

Directions: Review the lesson. Add the following columns to solve the problems.

1. How many halves in 2 1/2? _____
2. How many halves in
    a. 3 1/2 _____
    b. 4 1/2 _____
    c. 5 1/2 _____
    d. 6 1/2 _____
3. How many thirds in
    a. 4 1/3 _____
    b. 5 2/3 _____
    c. 6 1/3 _____
    d. 4 2/3 _____
4. How many fourths in
    a. 3 1/4 _____
    b. 4 3/4 _____
    c. 5 1/4 _____
    d. 6 3/4 _____
5. How many fifths in
    a. 1 1/5 _____
    b. 3 2/5 _____
    c. 6 2/5 _____
    d. 7 1/5 _____
6. How many sixths in
    a. 2 5/6 _____
    b. 4 5/6 _____
    c. 5 1/6 _____
    d. 6 5/6 _____

7. How many sevenths in
    a. 5 3/7 _____
    b. 6 4/7 _____
    c. 7 5/7 _____
    d. 8 6/7 _____
8. How many eighths in
    a. 3 5/8 _____
    b. 4 7/8 _____
    c. 5 1/8 _____
    d. 6 3/8 _____
9. How many ninths in
    a. 6 8/9 _____
    b. 7 1/9 _____
    c. 8 2/9 _____
    d. 9 5/9 _____
10. How many tenths in
    a. 6 3/10 _____
    b. 7 7/10 _____
    c. 8 9/10 _____
    d. 9 1/10 _____
11. How many elevenths in
    a. 6 5/11 _____
    b. 7 6/11 _____
    c. 8 7/11 _____
    d. 9 8/11 _____
12. How many twelfths in
    a. 5 1/2 _____
    b. 6 7/12 _____
    c. 7 5/12 _____
    d. 9 5/12 _____

LESSON 29

Name _____

PRACTICAL ARTICLE 99 Date _____

OBJECTIVE(S)

- Identify compound fractions

Directions: Children circle the compound fractions, leaving the simple fractions uncircled.

a. 1/4

b. 3/8 of 1/2

c. 11/12 of 5/6

d. 1/3 of 2/5

e. 3/4 of 3/4

f. 4/5

g. 1/4 of 1/4

h. 6/7

i. 9/10

j. 1123/3459

k. 4/5 of 8/9

l. 12/13

LESSON 30

Name _____

PRACTICAL ARTICLE 100 Date _____

OBJECTIVE(S)

- Identify simple and complex fractions

Directions: Children circle only the complex fractions.

a. $\frac{1\ 3/4}{2\ ¾}$

b. 3/8

c. $\frac{21/73}{4}$

d. 2/5

e. 3 3/4

f. 4/5

g. $\frac{6\ 7/8}{8}$

h. 6/7

i. $\frac{9\ 9/10}{3/4}$

j. 45/46

k. $\frac{4\ 8/9}{7}$

l. $\frac{1\ 12/13}{47}$

LESSON 31

Name _____

PRACTICAL ARTICLE 101 Date _____

OBJECTIVE(S)

- Review the six principles of fraction operations

Directions: Children complete the following problems.

1. 2/7 * 3 = _____
2. 1/5 * 15 = _____
3. 4 * 1/3 = _____
4. 6 * 1/5 = _____
5. 2/7 ÷ 3 = _____
6. 1/5 ÷ 2 = _____
7. 1/3 ÷ 3 = _____
8. 1/5 ÷ 6 = _____
9. 2/7 * 1/1 = _____
10. 3/8 * 4/4 = _____
11. 4/9 * 11/11 = _____
12. 5/11 * 1002/1002 = _____
13. 2/7 ÷ 1/1 = _____
14. 6/10 ÷ 2/2 = _____
15. 4/9 ÷ 11/11 = _____
16. 5/11 ÷ 1002/1002 = _____

LESSON 32

Name _____

PRACTICAL ARTICLE 102 Date _____

OBJECTIVE(S)

- Reduce integers to improper fractions, having a given denominator

Directions: Children complete the following problems.

1. In 3 apples, how many halves? _____
2. In 4 apples, how many halves? _____
3. In 2 apples, how many thirds? _____
4. In 3 apples, how many fourths? _____
5. In 4 apples, how many fifths? _____
6. In 6 apples, how many tenths? _____
7. In 8 apples, how many twelfths? _____
8. Reduce 4 to sevenths. _____
9. Reduce 8 to ninths. _____
10. Reduce 19 to thirteenths. _____
11. Reduce 25 to twentieths. _____
12. Reduce 37 to twenty-thirds. _____

LESSON 33

Name _____

TEST ARTICLE 103 Date _____

OBJECTIVE(S)

- Reduce integers to fractions, having a given denominator

Directions: Children complete the following problems.

1. 14 to sevenths _____
2. 23 to elevenths _____
3. 7 to twenty-thirds _____
4. 63 to eighteenths _____
5. 90 to ninths _____
6. 31 to thirty-seconds _____
7. 3 to fifty-sixths _____
8. 26 to eighths _____
9. 315 to ninths _____
10. 200 to twelfths _____
11. 37 to eighteenths _____
12. 34 to fortieths _____
13. 14 to twentieths _____
14. 27 to thirteenths _____
15. 31 to sixteenths _____
16. 67 to twenty-seconds _____
17. 19 to ninetieths _____
18. 81 to twenty-ninths _____

LESSON 34

Name _____

PRACTICAL ARTICLE 104 Date _____

OBJECTIVE(S)

- Reduce mixed numbers to improper fractions

Directions: Children complete the following problems.

1. In 3 1/2 apples, how many halves? _____
2. In 4 1/2 apples, how many halves? _____
3. In 2 1/3 apples, how many halves? _____
4. In 2 2/3 apples, how many halves? _____
5. In 5 3/4 apples, how many halves? _____
6. Reduce 8 3/4 to an improper fraction. _____
7. Reduce 12 3/5 to an improper fraction. _____
8. Reduce 15 5/6 to an improper fraction. _____
9. Reduce 26 13/24 to an improper fraction. _____
10. Reduce 3 17/55 to an improper fraction. _____
11. Reduce 46 5/8 to an improper fraction. _____
12. Reduce 21 117/583 to an improper fraction. _____
13. Reduce 1 999/1000 to an improper fraction. _____
14. Reduce 14 6/71 to an improper fraction. _____
15. Reduce 10 1/111 to an improper fraction. _____

LESSON 35

Name _____

TEST ARTICLE 104 Date _____

OBJECTIVE(S)

- Reduce mixed numbers to improper fractions

Directions: Reduce the following to improper fractions.

1. 15 7/8 _____
2. 19 5/7 _____
3. 99 1/9 _____
4. 73 1/10 _____
5. 36 8/15 _____
6. 42 11/18 _____
7. 176 2/7 _____
8. 19 1/19 _____
9. 28 17/18 _____
10. 45 5/22 _____
11. 73 8/73 _____
12. 29 3/100 _____
13. 272 8/11 _____
14. 396 4/27 _____
15. 562 3/14 _____
16. 100 1/100 _____
17. 682 11/16 _____
18. 129 14/41 _____
19. 29 4/111 _____
20. 21 1/19 _____
21. 73 73/99 _____

LESSON 36

Name _____

PRACTICAL ARTICLE 105 Date _____

OBJECTIVE(S)

- Reduce improper fractions to mixed numbers and integers.

Directions: Children complete the following problems.

1. In 6/2 of an apple, how many apples? _____
2. In 9/4 of a dollar, how many dollars? _____
3. In 6/3 of an apple, how many apples? _____
4. In 12/4 of an apple, how many apples? _____
5. In 15/4 of a dollar, how many dollars? _____
6. In 17/5 of a dollar, how many dollars? _____
7. In 19/7 of a bushel, how many bushels? _____
8. In 23/10 of a dollar, how many dollars? _____
9. In 25/3 of a ounce, how many ounces? _____
10. In 53/4 of a dollar, how many dollars? _____
11. Reduce 75/4 to a mixed number. _____
12. Reduce 125/8 to a mixed number. _____
13. Reduce 611/24 to a mixed number. _____
14. Reduce 3000/75 to an integer. _____
15. Reduce 775/25 to an integer. _____
16. Reduce 171/12 to a mixed number. _____
17. Reduce 509/11 to a mixed number. _____
18. Reduce 6437/298 to a mixed number. _____
19. Reduce 7536/125 to a mixed number. _____
20. Reduce 3781/19 to an integer. _____
21. Reduce 1325/101 to a mixed number. _____

LESSON 37

Name _____

TEST ARTICLE 105 Date _____

OBJECTIVE(S)

- Reduce improper fractions to mixed numbers and integers.

Directions: Reduce the following integers or mixed numbers.

1. 457/6 _____
2. 368/8 _____
3. 1239/7 _____
4. 1239/10 _____
5. 4710/13 _____
6. 2617/15 _____
7. 4618/19 _____
8. 2468/17 _____
9. 3753/23 _____
10. 739/22 _____
11. 5647/14 _____
12. 3973/26 _____
13. 4140/18 _____
14. 4678/33 _____
15. 3003/77 _____
16. 9876/100 _____
17. 3402/42 _____
18. 1234/15 _____
19. 7630/35 _____
20. 12345/23 _____
21. 4678/97 _____

LESSON 38

Name _____

PRACTICAL ARTICLE 106 Date _____

OBJECTIVE(S)

- Reduce fractions to higher terms.

Directions: Children complete the following problems.

1. Reduce 4/5 to thirtieths _____
2. Reduce 1/2 to fourths _____
3. Reduce 2/3 to sixths _____
4. Reduce 3/4 to twelfths _____
5. Reduce 5/6 to twenty-fourths _____
6. Reduce 5/7 to twenty-eighths _____
7. Reduce 4/21 to eighty-fourths _____
8. Reduce 7/8 to seventy-seconds _____
9. Reduce 3/5 to sixtieths _____
10. Reduce 9/10 to hundredths _____
11. Reduce 9/20 to a fraction with denominator 720 _____
12. Reduce 13/14 to a fraction with denominator 2016 _____
13. Reduce 22/43 to a fraction with denominator 1935 _____
14. Reduce 35/41 to a fraction with denominator 8118 _____
15. Reduce 16/17 to a fraction with denominator 5134 _____
16. Reduce 77/81 to a fraction with denominator 23328 _____
17. Reduce 13/21 to a fraction with denominator 2541 _____

LESSON 39

Name _____

TEST ARTICLE 106

Date _____

OBJECTIVE(S)

- Reduce fractions given specified denominators

Directions: Children reduce the following fractions.

1. Reduce 4/11 to thirty-thirds. _____
2. Reduce 5/12 to sixtieths. _____
3. Reduce 3/8 to fortieths. _____
4. Reduce 4/5 to thirty-fifths. _____
5. Reduce 17/20 to hundredths. _____
6. Reduce 8/97 to a fraction whose denominator is 126. _____
7. Reduce 16/21 to a fraction whose denominator is 105. _____
8. Reduce 12/13 to a fraction whose denominator is 156. _____
9. Reduce 17/19 to a fraction whose denominator is 171. _____
10. Reduce 17/20 to a fraction whose denominator is 280. _____
11. Reduce 14/23 to a fraction whose denominator is 345. _____
12. Reduce 17/28 to a fraction whose denominator is 336. _____
13. Reduce 15/29 to a fraction whose denominator is 464. _____
14. Reduce 17/32 to a fraction whose denominator is 416. _____
15. Reduce 27/38 to a fraction whose denominator is 1368. _____
16. Reduce 81/88 to a fraction whose denominator is 7744. _____
17. Reduce 73/80 to a fraction whose denominator is 4560. _____
18. Reduce 13/212 to a fraction whose denominator is 3604. _____
19. Reduce 29/273 to a fraction whose denominator is 1911. _____
20. Reduce 179/197 to a fraction whose denominator is 6698. _____

LESSON 40

Name _____

PRACTICAL ARTICLE 107 Date _____

OBJECTIVE(S)

- Reduce a fraction to its lowest terms

Directions: Reduce the following to their lowest terms.

1. Reduce 24/30 to its lowest terms _____
2. Reduce 18/30 to its lowest terms _____
3. Reduce 60/90 to its lowest terms _____
4. Reduce 12/18 to its lowest terms _____
5. Reduce 30/45 to its lowest terms _____
6. Reduce 60/150 to its lowest terms _____
7. Reduce 42/70 to its lowest terms _____
8. Reduce 96/112 to its lowest terms _____
9. Reduce 60/125 to its lowest terms _____
10. Reduce 126/198 to its lowest terms _____
11. Reduce 182/196 to its lowest terms _____
12. Reduce 615/915 to its lowest terms _____
13. Reduce 873/1067 to its lowest terms _____
14. Reduce 777/1998 to its lowest terms _____
15. Reduce 909/2323 to its lowest terms _____
16. Reduce 391/667 to its lowest terms _____
17. Reduce 585/1287 to its lowest terms _____
18. Reduce 796/14129 to its lowest terms _____
19. Reduce 1457/5921 to its lowest terms _____
20. Reduce 6465/7335 to its lowest terms _____

LESSON 41

Name _____

TEST ARTICLE 107

Date _____

OBJECTIVE(S)

- Reduce a fraction to its lowest terms

Directions: Reduce the following to their lowest terms.

1. 144/169 _____
2. 84/126 _____
3. 405/705 _____
4. 567/1001 _____
5. 407/999 _____
6. 407/990 _____
7. 803/876 _____
8. 9200/12075 _____
9. 1625/3055 _____
10. 1234/4319 _____
11. 1681/1763 _____
12. 999/1350 _____
13. 3456/4356 _____
14. 3465/4356 _____
15. 945/1785 _____
16. 1296/1620 _____
17. 2345/3685 _____
18. 3468/5202 _____
19. 1950/4050 _____
20. 3025/7744 _____
21. 4001/5001 _____

LESSON 42

Name _____

INTELLECTUAL LESSON 27 Date _____

OBJECTIVE(S)

- Reduce fractions to their lowest terms

Directions: Children complete the following problems.

1. Reduce 2/4 to its lowest terms. _____
2. Reduce 2/6 to its lowest terms. _____
3. Reduce 3/6 to its lowest terms. _____
4. Reduce 4/6 to its lowest terms. _____
5. Reduce 4/8 to its lowest terms. _____
6. Reduce to their lowest terms:
   a. 5/10 _____
   b. 3/9 _____
   c. 6/8 _____
   d. 4/10 _____
   e. 8/10 _____
   f. 10/12 _____
7. Reduce to their lowest terms:
   a. 6/12 _____
   b. 5/15 _____
   c. 6/9 _____
   d. 9/12 _____
   e. 12/15 _____
   f. 15/18 _____

8. Reduce to their lowest terms:
    a. 8/12 _____
    b. 12/16 _____
    c. 10/25 _____
    d. 12/20 _____
    e. 20/24 _____
    f. 21/49 _____
9. Reduce to their lowest terms:
    a. 9/24 _____
    b. 10/35 _____
    c. 15/20 _____
    d. 18/30 _____
    e. 25/30 _____
    f. 32/56 _____
10. Reduce to their lowest terms:
    a. 12/27 _____
    b. 14/21 _____
    c. 18/24 _____
    d. 21/35 _____
    e. 30/36 _____
    f. 36/68 _____
11. Reduce to their lowest terms:
    a. 12/30 _____
    b. 16/24 _____
    c. 21/28 _____
    d. 24/40 _____
    e. 30/42 _____
    f. 35/56 _____

12. Reduce to their lowest terms:
    a. 18/27 _____
    b. 20/25 _____
    c. 24/32 _____
    d. 25/40 _____
    e. 25/45 _____
    f. 35/42 _____
13. Reduce to their lowest terms:
    a. 27/36 _____
    b. 36/45 _____
    c. 45/54 _____
    d. 48/56 _____
    e. 49/63 _____
    f. 56/64 _____
14. Reduce to their lowest terms:
    a. 28/35 _____
    b. 40/48 _____
    c. 42/49 _____
    d. 42/54 _____
    e. 63/72 _____
    f. 72/81 _____

LESSON 43

Name _____

INTELLECTUAL LESSON 28 Date _____

OBJECTIVE(S)

- Reduce fractions to their lowest terms

Directions: Children complete the following problems.

1. Reduce 1/2 to fourths. _____
2. Reduce 1/3 to sixths. _____
3. Reduce 1/4 to eighths. _____
4. Reduce 1/5 to tenths. _____
5. Reduce 1/6 to twelfths. _____
6. Reduce 1/3 to ninths. _____
7. Reduce 1/5 to tenths. _____
8. Reduce 1/4 to twelfths. _____
9. Reduce 2/3 to ninths. _____ Reduce 2/3 to twelfths. _____
10. Reduce 3/4 to eighths. _____ Reduce 3/4 to twelfths. _____
11. Reduce 2/5 to tenths. _____ Reduce 2/5 to fifteenths. _____
12. Reduce 3/5 to twentieths. _____ Reduce 3/5 to twenty-fifths. _____
13. Reduce 4/5 to thirtieths. _____ Reduce 4/5 to thirty-fifths. _____
14. Reduce 5/6 to twelfths. _____ Reduce 5/6 to eighteenths. _____
15. Reduce 3/7 to fourteenths. _____ Reduce 3/7 to twenty-firsts. _____
16. Reduce 5/7 to twenty-eighths. _____ Reduce 5/7 to thirty-fifths. _____
17. Reduce 3/8 to sixteenths. _____ Reduce 3/8 to twenty-fourths. _____
18. Reduce 5/8 to thirty-seconds. _____ Reduce 5/8 to fortieths. _____
19. Reduce 2/9 to eighteenths. _____ Reduce 2/9 to twenty-sevenths. _____
20. Reduce 4/9 to thirty-sixths. _____ Reduce 4/9 to forty-fifths. _____
21. Reduce 5/9 to fifty-fourths. _____ Reduce 5/9 to sixty-thirds. _____
22. Reduce 7/10 to twentieths. _____ Reduce 7/10 to thirtieths. _____
23. Reduce 5/12 to twenty-fourths. _____ Reduce 5/12 to thirty-sixths. _____

LESSON 44

Name _____

PRACTICAL ARTICLE 108 Date _____

OBJECTIVE(S)

- Reduce two or more fractions to their least common denominators

Directions: Reduce the following fractions to their least common denominators.

1. 3/4, 5/6, 8/9, 11/12 _____
2. 1/2, 2/3, 3/4 _____
3. 2/3, 5/6, 7/9 _____
4. 1/2, 3/4, 4/5 _____
5. 3/8, 4/5, 9/10 _____
6. 2/3, 3/4, 7/8 _____
7. 3/4, 5/8, 5/9 _____
8. 1/2, 3/4, 7/8 _____
9. 2/3, 5/6, 7/12 _____
10. 3/4, 5/8, 7/12 _____
11. 1/2, 2/3, 3/4, 4/5 _____
12. 2/3, 2/5, 3/6, 5/8 _____
13. 2/7, 5/14, 9/21, 11/28 _____
14. 2/5, 3/4, 6/9, 15/18 _____
15. 2, 3/4, 5/9, 7/12 _____
16. 2 2/3, 3/5, 4, 5 5/6 _____
17. 2 1/2, 3 1/3, 4 1/4, 5 _____
18. 7/16, 11/18, 17/24, 19/36, 25/48 _____
19. 4/7, 8/10, 5/12, 17/35, 4/63, 15/28 _____
20. 3/5, 7/10, 6/25, 11/30, 18/45, 23/60_____

LESSON 45

Name _____

TEST ARTICLE 108 Date _____

OBJECTIVE(S)

- Reduce a fraction to its least common denominators

Directions: Reduce the following to their least common denominators.

1. 2/3, 1/4, 3/5 _____
2. 4/5, 5/6, 8/9 _____
3. 3/8, 3/4, 3/7 _____
4. 4/9, 7/10, 8/15 _____
5. 2/5, 3/10, 4/15, 9/20 _____
6. 7/8, 7/12, 7/16, 7/24 _____
7. 9/10, 7/12, 9/20, 7/24 _____
8. 4/15, 5/24, 7/30, 9/40 _____
9. 13/20, 13/40, 13/60, 13/80 _____
10. 9/14, 9/22, 9/26 _____
11. 7/9, 5/6, 3/4, 3/8, 5/12 _____
12. 3/25, 7/20, 9/10, 11/50 _____
13. 3/4, 1/6, 7/9, 11/12, 1/3 _____
14. 1/2, 1/12, 1/22, 1/82 _____

15. 3/10, 11/20, 5/12, 7/8 _____

16. 1/12, 4/9, 5/16, 13/18 _____

17. 4/15, 5/18, 7/10, 1/6 _____

18. 4/15, 5/18, 7/10, 1/16 _____

19. 3/8, 5/18, 9/28, 7/48 _____

20. 11/15, 7/10, 2/8, 5/6 _____

21. 2/9, 3/10, 2/7, 3/11 _____

22. 5/8, 7/9, 7/16, 7/18 _____

23. 2/11, 2/33, 3/22, 3/44 _____

24. 1 2/3, 1 3/4, 1 5/6, 1 7/12 _____

25. 2 4/5, 7/15, 3 3/10, 11/20 _____

26. 11/12, 15/16, 17/18, 23/24 _____

27. 4/7, 4/8, 4/9, 4/10 _____

28. 13/16, 2, 13/24, 13/36, 13/48 _____

29. 17/20, 18/21, 9/14, 17/18, 11/12_____

30. 4/9, 3/8, 5 5/6, 7/4, 8 11/12 _____

LESSON 46

Name _____

INTELLECTUAL LESSON 29 Date _____

OBJECTIVE(S)

- Reduce fractions to equivalent fractions

Directions: Reduce the following sets of fractions to equivalent fractions having a common denominator.

1. 2/3 and 3/4 _____
2.
   a. 1/2 and 1/3 _____
   b. 1/2 and 1/5 _____
   c. 1/3 and 1/5 _____
3.
   a. 1/3 and 1/4 _____
   b. 1/3 and 1/5 _____
   c. 1/4 and 1/5 _____
4.
   a. 2/3 and 2/5 _____
   b. 2/3 and 3/5 _____
   c. 2/3 and 4/5 _____
5.
   a. 3/4 and 2/5 _____
   b. 3/4 and 3/5 _____
   c. 3/4 and 4/5 _____
6.
   a. 2/5 and 5/6 _____
   b. 3/5 and 5/6 _____
   c. 4/5 and 5/6 _____
7.
   a. 5/6 and 2/7 _____
   b. 5/6 and 3/7 _____
   c. 5/6 and 4/7 _____

8.

a. 5/7 and 3/8 _____
b. 6/7 and 5/8 _____
c. 7/8 and 2/9 _____

9.

a. 4/9 and 3/10 _____
b. 5/9 and 7/10 _____
c. 7/9 and 9/10 _____

10.

a. 1/2, 1/3, and 1/5 _____
b. 1/3, 1/4, and 1/5 _____

11.

a. a. 2/3, 3/4, and 2/5 _____
b. 3/5, 5/6, and 1/2 _____

12. 2/3, 3/4, 4/5, and 1/2 _____

13. 3/4 and 5/6 _____

14.

a. 1/2 and 1/4 _____
b. 1/2 and 1/6 _____
c. 1/3 and 1/6 _____

15.

a. 2/3 and 5/6 _____
b. 3/4 an 3/8 _____
c. 2/8 and 2/9 _____

16.

a. 5/6 and 5/8 _____
b. 5/6 and 7/9 _____
c. 7/8 and 5/12 _____

17.

a. 1/2, 1/3, and 1/4 _____
b. 1/3, 1/4, and 1/6 _____

18.

a. 2/3, 3/4, and 5/6 _____

b. 2/3, 3/4, and 5/8 _____

19.

a. 3/4, 5/6, and 7/8 _____

b. 2/3, 5/6, and 2/9 _____

20.

a. 3/4, 4/9, and 5/12 _____

b. 5/6, 8/9, and 7/12 _____

21.

a. 1/2, 1/3, 1/4, and 1/6 _____

b. 1/3, 1/5, 1/6, and 1/10 _____

22.

a. 2/3, 3/4, 5/6, and 7/8 _____

b. 1/3, 1/4, 5/9, 7/12 _____

23.

a. 3/4, 5/6, 7/8, and 8/12 _____

b. 2/5, 4/6, 6/9, and 5/12 _____

24.

a. 1/2, 1/3, 1/4, 1/6, and 1/8 _____

b. 2/3, 3/4, 5/6, 7/8, and 11/12 _____

25. 1/2, 2/3, 3/4, 4/5, 5/6, 9/10, and 11/12 _____

LESSON 47

Name _____

INTELLECTUAL LESSON 30 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. James divided a melon, giving to his sister 1/2, and to his brother 1/4: what part did he give away?

2. Thomas gave 3/4 of a dollar for a knife, and 1/2 of a dollar for a ball: how much did he give for both?

3. A yard of flannel costs $1/2, and a yard of cloth, $2/3: how much do both cost?

4. I give Mary 1/2, Jane 1/4, and William 1/8 of an orange: how much do I give to all?

5. What is the sum of 1/4 and 1/3?

6. Thomas bought a copybook for $1/10 and a reader for $1/2: how much did both cost?

7. Bought 1 1/4 yards of muslin at one store, and 2 1/3 yards at another: how many yards did I purchase?

8. I planted 2 1/2 acres of ground in corn, and 8 2/3 acres in oats: how many acres did I plant?

9. John bought a knife for $1/2, a slate for $1/3, and a book for $5/8: how much did all cost?

Add the following fractions:

10.

a. 1/2 and 3/5 _____

b. 1/2 and 3/8 _____

c. 2/3 and 3/4 _____

11.

a. 1/3 and 2/5 _____

b. 1/4 and 1/6 _____

c. 1/4 and 1/5 _____

12.

a. 1/2 and 1/7 _____

b. 3/4 and 5/7 _____

c. 3/4 and 5/8 _____

13.

a. 5/6 and 4/5 _____

b. 5/9 and 5/8 _____

c. 5/7 and 5/9 _____

14.

a. 1 3/4 and 2 1/3 _____

b. 1/2, 1/3, 1/4, and 1/5 _____

15. 3 2/3 and 4 5/6 _____

16.

a. 4 3/7 and 5 1/3 _____

b. 1 1/2, 2 3/4, 4/5, and 6 2/10 _____

17.

a. 5 3/8 and 4 4/9 _____

b. 5/6, 3 1/3, 4, and 5 5/8 _____

LESSON 48

Name _____

INTELLECTUAL LESSON 31 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. James received 1/2 an orange and Charles, 1/3: how much more did James receive than Charles?

2. If I give to Mary 1/2 of an apple, and to Jane 1/4, how much more will Mary have than Jane?

3. James bought 2 melons; he gave to Lucy half of the first, and to Jane two-thirds of the second: what part of a melon had Jane more than Lucy?

4. If a bushel of wheat cost $1 1/4, and a bushel of corn, $2/3 how much will the wheat cost more than the corn?

5. Joseph bought a quart of chestnuts, and gave 1/2 to his mother and 1/6 to his sister: how much more did he give his mother than his sister?

6. Jane gave 1 3/4 oranges to Mary, and 2 1/3 to Lucy: how much more did she give to Lucy than to Mary?

7.

a. 1/2 – 1/5 = _____

b. 1/3 – 1/4 = _____

c. 1/4 – 1/5 = _____

8.

a. 1/2 – 2/9 = _____

b. 3/5 – 1/2 = _____

c. 3/4 – 1/3 = _____

9.

a. 3/5 – 1/3 = _____

b. 5/8 – 3/5 = _____

c. 2/3 – 3/7 = _____

10.

a. 7/9 – 1/2 = _____

b. 4/5 – 1/3 = _____

c. 3/7 – 1/4 = _____

11.

a. 5/7 – 3/5 = _____

b. 3/4 – 5/7 = _____

c. 5/6 – 3/5 = _____

12.

a. 3/8 – 1/3 = _____

b. 6/7 – 5/6 = _____

c. 2 1/2 – 1/3 = _____

13. 5 1/6 – 2 2/3 = _____

14.

a. 7 3/5 – 3 1/2 = _____

b. 8 5/6 – 4 1/4 = _____

15.

a. 7 2/3 – 5 2/7 = _____

b. 8 1/2 – 6 4/9 = _____

c. 9 2/3 – 7 4/5 = _____

LESSON 49

Name _____

INTELLECTUAL LESSON 32 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. Mary divided a quart of pecans, giving Ann 1/3, and Jane 1/4 of them: what had she left?

2. After taking away 1/2 and 1/3 of an apple, what will be left?

3. Thomas wishes to divide an orange, and give Ann 1/3, and Lucy 2/5: how much will he have left?

4. A farmer sows 1/2 of a field in rye, 1/6 in barley, and the remainder in oats: how much does he sow in oats?

5. A man having 72 miles to travel, went 1/3 the distance the first day, 2/9 the second, and the remainder the third day: what part did he travel the last day, and how far?

6. David bought a pound of figs: he gave 1/3 to his mother, 1/4 to his sister, and 1/6 to his brother: what part had he left?

7. A farmer had 11/2 bushels of wheat: he gave to one poor man 1/2 of a bushel, and to another 1/3 of a bushel: how much wheat was left?

8. James had 7/8 of a pound of raisins: he gave to his brother half of a pound, and to his sister 1/4 of a pound: how much had he left?

9. A lady bought 3 1/3 yards of muslin at one store, and 2 1/4 yards at another: after using 1 1/2 yards, how much had she left?

10. William's father gave him $5/8: he gave to a poor person $1/8; for apples, $1/16; and for a book, $1/4: what part of a dollar had he left?

11. James' mother gave him a book: he read the first day 1/5; the second, 1/4; the third, 1/2; and the fourth, the remainder: what part did he read the fourth day?

12. A farmer has a flock of 84 sheep in four fields: the first contains 1/7; the second, 1/2; and the third, 1/4 of them: how many does the fourth field contain?

13. Daniel spends 1/3 of his time in sleep, 1/4 of it at school, 1/12 in reading, and 1/24 in learning music: what part of his time is not employed?

14. A pole is standing in a pond; 1/2 of it is in the air, and 1/3 in the water: what part is in the earth?

15. A student devotes 1/4 of his time to sleep, 1/3 to study, 1/24 to reading, 1/8 to exercise, and 1/12 to deeds of charity: what part of his time is unemployed?

16. After spending 1/2 and 1/3 of my money, and losing 1/12, I had $8 remaining: how much had I at first?

LESSON 50

Name _____

INTELLECTUAL LESSON 33 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. A mother gave each of her 3 children 1/2 an orange: how many oranges did it take?

2. John fed 5 horses, giving to each 1/2 a peck of oats: how many pecks did it take?

3. James gave 1/3 of an orange to each of his 4 sisters: how many did it take?

4. John gave 2/3 of a pineapple to each of his 2 brothers: how many did he give to both?

5. What are 4 times 2/3?

6. Thomas gave 1/4 of an apple to each of his 6 playmates: how many apples did it take?

7. Charles gave 3/4 of a pint of chestnuts to each of his 2 brothers: how many pints did it take?

8. Mary gave 3/4 of an orange to each of her 3 brothers: how many oranges did it take?

9. What are:
   a. 6 * 3/4 = _____
   b. 7 * 3/4 = _____
   c. 8 * 3/4 = _____

10. What are:
   a. 3 * 1/5 = _____
   b. 5 * 2/5 = _____
   c. 6 * 3/5 = _____

11. What are:
   a. 3 * 1/7 = _____
   b. 4 * 2/7 = _____
   c. 5 * 4/7 = _____

12. What are:
   a. 5 * 1/8 = _____
   b. 2 * 3/8 = _____
   c. 4 * 7/8 = _____

13. What are:
    a. 2 * 1/9 = _____
    b. 4 * 2/9 = _____
    c. 5 * 4/9 = _____

14. What are:
    a. 8 * 3/9 = _____
    b. 6 * 6/9 = _____
    c. 7 * 8/9 = _____

15. What are:
    a. 5 * 7/6 = _____
    b. 8 * 3/5 = _____
    c. 9 * 2/5 = _____

16. What are:
    a. 7 * 5/8 = _____
    b. 6 * 7/9 = _____
    c. 8 * 3/7 = _____

17. What are:
    a. 3 * 5/4 = _____
    b. 4 * 6/5 = _____
    c. 6 * 3/7 = _____

18. What are:
    a. 7 * 5/3 = _____
    b. 7 * 5/2 = _____
    c. 9 * 4/3 = _____

LESSON 51

Name _____

PRACTICAL ARTICLE 109-110 Date _____

OBJECTIVE(S)

- Find the sum of two or more fractional numbers with the same denominator

Directions: Solve the following addition problems.

1. Add 1/5, 2/5, and 3/5 _____
2. Add 1/4, 2/4, and 3/4 _____
3. Add 1/5, 2/5, 3/5, and 4/5 _____
4. Add 1/7, 2/7, 3/7, and 6/7 _____
5. Add 4/9, 5/9, 7/9, and 8/9 _____
6. Add 3/11, 7/11, 8/11, and 10/11 _____
7. Add 5/13, 8/13, 9/13, and 11/13 _____
8. Add 7/15, 8/15, 11/15, and 13/15 _____
9. Add 9/20, 11/20, 13/20, and 17/20 _____
10. Add 12/25, 16/25, 18/25, and 24/25 _____

LESSON 52

Name _____

TEST ARTICLE 110 Date _____

OBJECTIVE(S)

- Find the sum of two or more fractional numbers with the same denominator

Directions: Solve the following addition problems.

1. Add 7/18, 12/18, 15/18, 14/18 _____
2. Add 5/12, 7/12, 11/12, 9/12 _____
3. Add 13/24, 14/24, 15/24, 16/24 _____
4. Add 18/36, 21/36, 24/36, 27/36 _____
5. Add 11/48, 12/48, 13/48, 14/48 _____
6. Add 4/77, 13/77, 18/77, 9/77 _____
7. Add 53/80, 63/80, 73/80, 23/80 _____
8. Add 24/72, 27/72, 18/72, 32/72 _____
9. Add 12/84, 16/84, 21/84, 28/84 _____
10. Add 56/112, 63/112, 64/112, 34/112 _____
11. Add 72/120, 80/120, 96/120, 27/120 _____
12. Add 75/144, 85/144, 95/144, 105/144 _____
13. Add 47/160, 48/160, 49/160, 50/160 _____
14. Add 77/180, 87/180, 97/180, 107/180 _____

LESSON 53

Name _____

PRACTICAL ARTICLE 111 Date _____

OBJECTIVE(S)

- Find the sum of two or more fractional numbers with different denominators

Directions: Solve the following addition problems.

1. Add 5/6, 8/9, and 11/12 _____

2. Add 1/2 and 1/3 _____

3. Add 1/3 and 1/4 _____

4. Add 1/2 and 3/5 _____

5. Add 5/6 and 1/9 _____

6. Add 3/4 and 5/6 _____

7. Add 7/8 and 11/12 _____

8. Add 2 1/2 and 3 2/3 _____

9. Add 2/3, 3/4, 5/6 _____

10. Add 1/4, 7/8, 11/12 _____

11. Add 1/8, 1/9, 2/11 _____

12. Add 4/5, 7 1/2, 8 3/4 _____

13. Add 1/12, 1/13, 1/14, 1/15 _____

14. Add 13/18, 8/15, 11/20, 13/30 _____

15. Add 7/12, 2 5/6, 3 3/8, 3 4/9 _____

16. Add 16 2/3, 12 3/4, 8 3/5, 2 1/4 _____

17. Add 1/2, 1/3, 1/4, 1/5, 1/6 _____

18. Add 2/5, 7/16, 7/50, 3/140, 3/2800 _____

19. Add 1/20, 7/16, 11/12, 1 2/15, 2 11/18 _____

20. Add 2/3, 2 1/2, 4 1/5, 6 1/3, 8 1/4 _____

21. Add 1 1/3, 4 2/7, 2 1/5, 2 1/21 _____

LESSON 54

Name _____

TEST ARTICLE 111 Date _____

OBJECTIVE(S)

- Find the sum of two or more fractional numbers with different denominators

Directions: Solve the following addition problems.

1. Add 5/16, 5/6, and 5/12 _____

2. Add 16/12, 17/28, 19/42, 15/56 _____

3. Add 7/12, 7/8, 7/9, 7/18 _____

4. Add 14/15, 17/18, 13/45, 11/30 _____

5. Add 6/7, 5/8, 4, 3/4 _____

6. Add 5/11, 7/12, 8/13 _____

7. Add 4/27, 11/18, 19/72, 17/36 _____

8. Add 2/3, 3/4, 4/5, 5/7 _____

9. Add 2/3, 3/4, 4/5, 5/8 _____

10. Add 4 7/8, 3 2/3, 8 1/2, 10 1/10 _____

11. Add 5 1/5, 6 1/6, 8 1/8, 10 1/10 _____

12. Add 12 1/2, 16 2/3, 29 1/6, 40 1/4 _____

13. Add 38 7/8, 38 7/12, 38 7/9, 38 7/18 _____

14. Add 123 1/4, 135 1/6, 147 1/8, 150 1/3 _____

15. Add 1725 1/3, 87 3/4, 93 7/8, 591 5/6 _____

16. Add 4/5, 3/8, 5/6, 5/8, 1/6 _____

17. Add 4/9, 5/8, 2/5, 5/9 _____

18. Add 1 1/3, 1 1/4, 1 1/6, 1 1/8, 1 1/2 _____

19. Add 2 2/3, 2 3/4, 2 5/6, 2 7/8, 2 11/12 _____

20. Add 1 3/8, 1 5/9, 2 2/3, 7 3/8 _____

21. Add 3 1/2, 2 1/3, 3 1/4, 4 1/3 _____

22. Add 3/16, 8/20, 5/16, 5/24, 7/12, 7/8 _____

23. Add 1 2/3, 1 3/4, 1 5/6, 1 1/8, 1 5/12 _____

24. Add 6 1/2, 6 2/8, 7 1/4, 7 1/3, 8 3/8 _____

25. Add 16 1/3, 17 3/4, 8 11/12, 7 5/12, 4 7/12 _____

26. Add 1 1/3, 1 2/5, 1 4/15, 1 5/18, 1 7/9 _____

27. Add 6/7, 5/8, 3/4, 3/14 _____

28. Add 234 2/7, 236 3/8, 238 1/4, 239 1/9 _____

29. Add 12 4/5, 124 5/6, 1 3/8, 17 1/4, 18 1/3 _____

30. Add 1 2/5, 1 5/6, 1 7/8, 11 1/3, 19 11/40 _____

LESSON 55

Name _____

PRACTICAL ARTICLE 112-113 Date _____

OBJECTIVE(S)

- Find the difference of two fractional numbers with the same denominators

Directions: Solve the following subtraction problems.

1. 5/7 – 2/7 = _____

2. 3/4 – 1/4 = _____

3. 7/8 – 5/8 = _____

4. 5/9 – 2/9 = _____

5. 8/10 – 3/10 = _____

6. 3 1/8 – 1 3/8 = _____

7. 4 1/4 – 2 3/4 = _____

8. 8 1/3 – 3 2/3 = _____

9. 23 7/20 – 17 11/20 = _____

LESSON 56

Name _____

TEST ARTICLE 113 Date _____

OBJECTIVE(S)

- Find the difference of two fractional numbers with the same denominators

Directions: Solve the following subtraction problems.

1. 18 15/16 – 5 5/16 = _____
2. 47 17/20 – 23 11/20 = _____
3. 29 15/18 – 21 7/18 = _____
4. 24 17/20 – 15 9/20 = _____
5. 91 5/6 – 19 2/6 = _____
6. 42 19/20 – 31 7/20 = _____
7. 23 7/16 – 14 11/16 = _____
8. 193 17/18 – 34 11/18 = _____
9. 39 17/24 – 29 19/24 = _____
10. 100 14/25 – 80 21/25 = _____

11. 38 17/27 – 26 26/27 = _____

12. 237 1/80 – 37 21/80 = _____

13. 327 11/24 – 184 16/24 = _____

14. 168 15/36 – 93 19/36 = _____

15. 299 1/8 – 11 5/8 = _____

16. 73 18/35 – 47 11/35 = _____

17. 400 – 47 3/5 = _____

18. 736 – 367 18/49 = _____

19. 19 7/100 – 7 19/100 = _____

20. 365 – 37 11/100 = _____

21. 423 18/23 – 237 = _____

22. 146 17/23 – 92 19/32 = _____

23. 1473 7/8 – 597 3/8 = _____

24. 573 109/120 – 294 47/120 = _____

LESSON 57

Name _____

PRACTICAL ARTICLE 114 Date _____

OBJECTIVE(S)

- Find the difference of two fractional numbers with different denominators

Directions: Solve the following subtraction problems.

1. 9/10 – 5/6 = _____
2. 1/2 – 1/3 = _____
3. 1/3 – 1/4 = _____
4. 3/4 – 2/3 = _____
5. 4/5 – 1/2 = _____
6. 5/6 – 3/10 = _____
7. 5/6 – 3/8 = _____
8. 5/9 – 1/6 = _____
9. 4/15 – 1/10 = _____

10. 16/21 – 5/14 = _____

11. 3 1/2 – 1 2/3 = _____

12. 5 – 2/3 = _____

13. 5 2/3 – 4 1/2 = _____

14. 7 2/3 – 4 3/4 = _____

15. 14 1/4 – 12 2/3 = _____

16. 5 3/14 – 2 10/21 = _____

17. 4 1/24 – 3 1/16 = _____

18. 56 1/3 – 42 1/4 = _____

19. 60 4/5 – 41 3/10 = _____

20. 97 1/2 – 48 5/6 = _____

LESSON 58

Name _____

TEST ARTICLE 114 Date _____

OBJECTIVE(S)

- Find the sum of two or more fractional numbers with different denominators

Directions: Solve the following subtraction problems.

1. 2/3 – 5/8 = _____
2. 5/7 – 6/11 = _____
3. 11/12 – 9/10 = _____
4. 7/18 – 8/16 = _____
5. 4/5 – 5/12 = _____
6. 19/20 – 7/15 = _____
7. 17/18 – 7/12 = _____
8. 8/7 – 7/8 = _____
9. 13/16 – 13/20 = _____
10. 7/11 – 7/12 = _____

11. 6 – 2 7/12 = _____

12. 6 5/8 – 2 11/12 = _____

13. 1 7/9 – 17/28 = _____

14. 15 3/16 – 8 = _____

15. 8 1/3 – 7 1/7 = _____

16. 13 18/19 – 5 7/8 = _____

17. 6 7/11 – 17/20 = _____

18. 800 – 147 13/21 = _____

19. 728 1/2 – 149 15/28 = _____

20. 24 17/48 – 19 19/40 = _____

21. 48 17/24 – 26 19/25 = _____

22. 432 7/8 – 329 9/10 = _____

23. 16980 5/6 – 7991 8/11 = _____

LESSON 59

Name _____

PRACTICAL ARTICLE 115 Date _____

OBJECTIVE(S)

- Find the product of two fractional numbers

Directions: Solve the following multiplication problems.

1. If 1 apple cost 4/5 of a cent, what will 3 apples cost?

2. At 12 ct. a yard, what will 2/5 of a yard of ribbon cost?

3. What will 4/7 of a yard of cloth cost, at 3/5 of a dollar per yard?

4. Multiply 2/3 by 4/5.

5. Multiply 3/4 by 3.

6. Multiply 8 by 2/3.

7. Multiply 3/4 by 5/7.

8. Multiply 2/3 by 4.

9. Multiply 5 by 3/4.

10. Multiply 8/9 by 3/4.

11. Multiply 2/3 by 6.

12. Multiply 20 by 3/4.

13. Multiply 8/13 by 11/16.

14. Multiply 3/5 by 10.

15. Multiply 12 by 2/3.

16. Multiply 9/13 by 3/7.

17. Multiply 3/7 by 6.

18. Multiply 7 by 2/3.

19. Multiply 2 1/4 by 3 1/2.

20. Multiply 18 3/4 by 8.

21. Multiply 8 by 3 2/3.

22. Multiply 2 1/2 by 2 1/2.

23. Multiply 10 7/9 by 7.

24. Multiply 25 by 8 3/5.

25. Multiply 9/10 by 17 8/11.

26. Multiply 10 5/6 by 9.

27. Multiply 64 by 8 7/8.

28. Multiply 8 3/4 by 3/7.

29. Multiply 5/12, 9/16, 2 2/11.

30. Multiply 2 1/16, 3/11, 1 7/9.

31. Multiply 6 3/4, 2 8/9, 21.

32. Multiply 2 1/2 3 2/3, 4 3/4, 1 1/7.

33. Multiply 2 1/5, 2 3/26, 3 1/4, 1 5/11.

34. Multiply 7/8, 3/10, 8/9, 5/6, 2/3, 6/7.

35. Multiply 1/4, 9/7, 4/5, 7/9, 5/4, 2/3, 6.

36. Multiply 6/7, 4/9, 1 3/4, 1/6, 3/4, 5/6, 2/5, 20.

37. Multiply 2 1/2, 6 2/5, 3 1/4, 7/13, 2, 3/7.

LESSON 60

Name _____

TEST ARTICLE 115 Date _____

OBJECTIVE(S)

- Find the product of two fractional numbers

Directions: Solve the following multiplication problems. Multiply together:

1. 7/8, 9/10

2. 5/12, 8/15

3. 15/28, 14/25

4. 40/80, 40/63

5. 33/50, 17/55

6. 15/14, 21/10

7. 7/8, 4/9, 6/21

8. 3/5, 11/12, 25/22

9. 2/3, 8/9, 15/56

10. 6/11, 26/21, 33/13

11. 18/7, 20/9, 28/11

12. 3 4/7, 2 2/5

13. 5 1/3, 5 1/4, 5 1/5

14. 2 2/7, 3 3/8, 4 4/9

15. 5 1/2, 5 1/3, 5 1/4

16. 4 2/5, 6, 3 2/11

17. 35 3/5, 9

18. 5/7, 150, 6 3/10

19. 325 5/8, 10 2/3

20. 13 3/4, 13 3/4

21. 1562 1/2, 1562 1/2

22. 3 1/4, 3 1/5, 3 1/6

23. 8, 7 2/3, 5

24. 4 4/7, 5 5/8, 5 5/9, 3 1/2

25. 5 1/8, 6 1/4, 7 1/5, 8 1/6

26. 6/35, 6, 4 2/3, 5 5/9

27. 11/12, 3 1/2, 1 1/5, 2 2/5

28. 8 8/9, 3 3/4, 7, 3 3/5

29. 2 2/3, 2 2/5, 2 2/9, 2 2/11

30. 7, 7 1/2, 8, 8 1/2, 9

31. 8, 8 1/3, 8 2/3, 9

32. 4/15, 3 1/7, 3 1/8, 3 1/9, 6

LESSON 61

Name _____

PRACTICAL ARTICLE 116 Date _____

OBJECTIVE(S)

- Find the fractional parts of integers via multiplication

Directions: Solve the following multiplication problems.

1. What 2/3 of 2?

2. What is 3/4 of 5?

3. What is 2/5 of 7?

4. What is 4/5 of 10?

5. What is 5/6 of 12?

6. What is 5/6 of 15?

7. What is 8/9 of 21?

8. What is 7/10 of 25?

9. What is 5/12 of 27?

10. What is 7/12 of 28?

LESSON 62

Name _____

TEST ARTICLE 116 Date _____

OBJECTIVE(S)

- Find the fractional part of integers

Directions: Solve the following multiplication problems. What is:

1. 7/11 of 100?

2. 9/5 of 87?

3. 31/32 of 80?

4. 14/45 of 70?

5. 8/91 of 9?

6. 13/30 of 43?

7. 18/19 of 18?

8. 14/27 of 72?

9. 11/120 of 17?

10. 53/16 of 200?

11. 21/25 of 120?

12. 16/19 of 67?

LESSON 63

Name _____

PRACTICAL ARTICLE 117 Date _____

OBJECTIVE(S)

- Reduce compound fractions to simple fractions via multiplication

Directions: Solve the following reduction multiplication problems.

1. Reduce 2/3 of 4/5 to a simple fraction.

2. Reduce 3/5 of 7/8 to a simple fraction.

3. Reduce 1/2 of 3/5 to a simple fraction.

4. Reduce 1/2 of 3/5 of 2 3/4 to a simple fraction.

5. Reduce 7/11 of 2/3 to a simple fraction.

6. Reduce 3/4 of 5/8 to a simple fraction.

7. Reduce 2/3 of 5/7 of 1 4/9 to a simple fraction.

8. Reduce 2/3 of 3/4 of 4/5 to a simple fraction.

9. Reduce 1/3 of 3/4 of 5/6 to a simple fraction.

10. Reduce 3/5 of 5/7 of 7/8 to a simple fraction.

11. Reduce 3/5 of 4/9 of 7/12 of 18/35 to a simple fraction.

12. Reduce 1/3 of 3/4 of 4/9 to a simple fraction.

13. Reduce 1/9 of 3/4 of 1 1/3 to a simple fraction.

14. Reduce 3/5 of 6/7 of 1 17/18 to an integer.

15. Reduce 3/7 of 2 2/3 of 1 3/4 to an integer.

16. Reduce 9/13 of 7/18 of 1 6/7 to a simple fraction.

17. Reduce 1/2 of 4/5 of 1/8 of 5 to a simple fraction.

18. Reduce 1/2 of 2/3 of 3/4 of 4/5 of 5/8 of 5/9 of 9/10 to a simple fraction.

LESSON 64

Name _____

TEST ARTICLE 117 Date _____

OBJECTIVE(S)

- Reduce compound fractions to simple fractions via multiplication

Directions: Solve the following reduction multiplication problems.

1. 3/4 of 18/19

2. 5/7 of 17/20

3. 4/9 of 2 1/2

4. 5/8 of 13 1/3

5. 17/18 of 15/28

6. 11/13 of 19/15

7. 4/81 of 9/20

8. 14/15 of 11 1/3

9. 11/3 of 14/5

10. 3/100 of 4/81

11. 15/26 of 11 1/7

12. 3/4 of 7/8 of 10 2/3

13. 5/8 of 5/9 of 13 1/5

14. 3/10 of 7/5 of 24 2/7

15. 16/17 of 14/15 of 3/8 of 4 2/7

16. 9/16 of 25/36 of 7/4 of 3 3/5

17. 5/12 of 5/6 of 4/15 of 9/13

18. 27/32 of 14/21 of 20/3 of 6 2/7

19. 19/30 of 7/11 of 6/28 of 83/38

20. 13/16 of 8/9 of 5/3 of 4 4/5

21. 19/50 of 15/90 of 7/5 of 4 2/3

22. 3/4 of 5/6 of 16/21 of 5 1/4

23. 3/11 of 4/7 of 5/9 of 11/13 of 18 1/5

24. 11/9 of 14/6 of 5/22 of 130 1/2

25. 15/28 of 15/32 of 16/25 of 4 4/5

26. 11/20 of 18/13 of 17/9 of 17 1/3

27. 16/33 of 14/27 of 11/21 of 9/19 of 90

28. 5/14 of 18/29 of 21/25 of 7/9 of 6 1/4

LESSON 65

Name _____

INTELLECTUAL LESSON 34 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. If 3 bushels of corn cost $1, what will 2 bushels cost?

2. If 3 bushels of wheat cost $2, what will 2 bushels cost?

3. If 3 barrels of cider cost $8, what will 2 barrels cost?

4. If 4 barrels of apples cost $9, what will 2 barrels cost?

5. If 5 apples cost 2 cents, what will 4 apples cost?

6. James bought 3 lemons for 7 cents, how much would 2 lemons cost?

7. William bought 5 quarts of chestnuts for 18 cents; at that rate, what did 4 quarts cost?

8. If 4 pounds of cheese sell for 30 cents, what should 3 pounds sell for?

9. What are 3/4 of 9?

10. What are 4/5 of: 6? _____ 7? _____ 8? _____ 9? _____ 11? _____

11. What are 5/6 of: 5? _____ 7? _____ 10? _____ 11? _____ 12? _____

12. What are 6/7 of: 8? _____ 9? _____ 10? _____ 11? _____ 12? _____

13. What are 7/8 of: 5? _____ 7? _____ 9? _____ 11? _____ 12? _____

14. What are 8/9 of: 6? _____ 7? _____ 8? _____ 10? _____ 12? _____

15. What are 9/10 of: 6? _____ 8? _____ 9? _____ 11? _____ 12? _____

16. What are 10/11 of: 3? _____ 5? _____ 8? _____ 9? _____ 12? _____

17. What are 11/12 of: 7? _____ 8? _____ 9? _____ 10? _____ 11? _____

18. If 4 men perform a piece of work in 8 days, how long will it take 5 men?

19. If one barrel of flour serve 8 persons 20 days, how long will it last 11 persons?

20. If 7 men can do a piece of work in 5 days, how long will it require 8 men?

21. If 2 men build a wall in 12 days, how long will it take 7 men?

22. If it requires 11 days, of 8 hours each, to do a certain work, how many days, of 10 hours each, will be required to accomplish the same?

23. A man paid 37 cents for riding 8 miles: at the same rate, what will it cost to ride 11 miles?

24. If 2 pipes of a certain size empty a cistern in 17 minutes: in what time will 3 pipes empty it?

25. If 18 bushels of oats last 5 horses one week, how many bushels will 7 horses require?

26. If a laborer receives 5 bushels of wheat for 7 days' work, how much should they receive for 11 days?

27. If a carpenter earns $8 in 5 days, how much will they earn in 9 days?

28. A pole, 18 feet long, is two-sevenths in the earth, the rest in the air: what is the length of each part?

29. Three men found a bag containing $15: A got 2/9, B 1/3, and C the rest: what was the share of each?

30. If 3 ounces of snuff cost 36 cents, what should be charged for 2/3 of an ounce?

31. A watchmaker sold a watch for $18, and lost 2/5 of its value: how much did he lose?

32. A watchmaker sold a watch for $45, and gained 2/7 of its cost: what was its cost?

LESSON 66

Name _____

INTELLECTUAL LESSON 35 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. William gave 11/2 oranges to each of his 2 sisters: how many oranges did it take?

2. How many are 3 times 2 1/2?

3. If 1 bushel of wheat cost $1 1/3, what will 2 bushels cost?

4. How many are:
   a. 3 times 1 1/3?

   b. 2 times 2 2/3?

5. How many are:
   a. 3 times 3 1/3?

   b. 4 times 4 1/2?

6. How many are:
    a. 5 times 2 2/3?

    b. 6 times 3 2/3?

7. How many are:
    a. 8 times 3 1/3?

    b. 9 times 4 2/3?

8. If 1 bushel of barley cost $1 1/4, what will:
    a. 3 bushels cost?

    b. 4 bushels?

9. How many are:
    a. 5 times 1 1/4?

    b. 6 times 1 1/4?

10. How many are:
    a. 2 times 1 3/4?

    b. 3 times 2 1/4?

11. How many are:
    a. 4 times 3 1/4?

    b. 5 times 3 3/4?

12. How many are:
    a. 6 times 3 1/4?

    b. 8 times 3 3/4?

13. How many are:
    a. 7 times 2 1/4?

    b. 9 times 2 3/4?

14. How many are:
    a. 10 times 1 3/4?

    b. 10 times 3 1/4?

15. How many are 12 times 3 3/4

16. If a family consume 3 1/5 barrels of flour in one, month, how much will they require for 3 months?

17. How many are:
    a. 4 times 3 2/5?

    b. 5 times 3 3/5?

18. How many are:
    a. 2 times 6 3/5?

    b. 3 times 2 4/5?

19. How many are:
    a. 6 times 4 1/5?

    b. 6 times 3 4/5?

20. How many are:
    a. 7 times 4 2/5?

    b. 8 times 3 2/5?

21. How many are:
    a. 9 times 1 4/5?

    b. 9 times 3 1/5?

22. Three times 4 1/2 are how many?

23. Four times 4 3/4 are how many?

24. Five times 4 2/5 are how many?

25. Four times 6 1/3 are how many?

26. Five times 6 1/2 are how many?

27. Six times 6 2/3 are how many?

28. Seven times 6 5/6 are how many?

29. Four times 7 3/7 are how many?

30. Five times 7 4/7 are how many?

31. Six times 7 6/7 are how many?

32. Four times 8 3/8 are how many?

33. Five times 8 1/2 are how many?

34. Six times 8 7/8 are how many?

35. Three times 9 5/9 are how many?

36. Five times 9 2/3 are how many?

37. Seven times 9 8/9 are how many?

38. Two times 10 3/10 are how many?

39. Five times 10 3/5 are how many?

40. Six times 10 4/5 are how many?

41. Nine times 10 7/10 are how many?

42. Ten times 9 8/9 are how many?

43. Twelve times 11 9/11 are how many?

44. How many are 9 5/8 multiplied by 6?

45. How many are 7 3/5 multiplied by 7?

46. How many are 4 10/11 multiplied by 11?

47. How many are 10 5/6 multiplied by 11?

48. How many are 12 8/9 multiplied by 10?

LESSON 67

Name _____

INTELLECTUAL LESSON 36 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. Bought 5 boxes of raisins, at $4 4/5 a box; paid for them with flour, at $6 a barrel: how many barrels did it take?

2. Bought 6 gallons of wine, for $4 2/3 a gallon, and paid for it with raisins, at $5 a box: how many boxes did it take?

3. Bought 7 kegs of tobacco, for $5 4/7 a keg, and paid for it with paper, at $6 a ream: how many reams did it take?

4. Five times 5 3/5 are how many times 6?

5. Four times 4 3/4 are how many times:
   a. 3?

   b. 5?

   c. 6?

   d. 8?

   e. 9?

   f. 10?

6. Six times 6 5/6 are how many times:
   a. 4?

   b. 5?

   c. 7?

d. 8?

e. 9?

f. 10?

7. Five times 5 2/5 are how many times:
   a. 4?

   b. 6?

   c. 8?

   d. 9?

   e. 10?

8. Eight times 8 1/8 are how many times:
   a. 5?

   b. 6?

   c. 7?

   d. 9?

   e. 10?

9. Seven times 6 2/7 are how many times:
   a. 5?

   b. 8?

   c. 9?

   d. 10?

10. Ten times 5 2/5 are how many times:
    a. 6?

    b. 7?

    c. 8?

    d. 9?

    e. 10?

11. Eight times 8 3/8 are how many times:
    a. 6?

    b. 7?

    c. 9?

    d. 10?

e. 11?

12. Seven times 7 4/7 are how many times:
    a. 5?

    b. 6?

    c. 8?

    d. 9?

    e. 10?

13. Five times 5 4/5 are how many times:
    a. 6?

    b. 7?

    c. 8?

d. 9?

e. 10?

14. Nine times 6 1/3 are how many times:
    a. 5?

    b. 7?

    c. 8?

    d. 10?

    e. 11?

15. Seven times 7 3/7 are how many times:
    a. 5?

    b. 6?

    c. 9?

    d. 10?

    e. 12?

16. Bought 4 2/3 yards of cloth, at $3 a yard, and paid for it with cheese, at $7 a hundred-weight: how many hundred-weights did it take?

17. Bought 4 4/5 pounds of nails, at 5 cents a pound, and paid for them with eggs, at 12 cents a dozen: how many dozen did it take?

18. Bought 7 5/7 pounds of sugar, at 7 cents a pound, and paid for it with chickens, at 27 cents each: how many did it take?

19. Bought 9 2/7 pounds of sugar, at 7 cents a pound, and paid for it with eggs, at 13 cents a dozen: how many dozen did it take?

20. How many pounds of rice, at 7 cents a pound, can I get for 8 2/9 yards of calico, at 9 cents a yard?

21. How many barrels of flour, at $6 a barrel, must be given in exchange for 4 5/7 yards of cloth, at $7 a yard?

22. Bought 5 3/7 pounds of sugar, at 7 cents a pound, and paid for it with raisins, at 6 cents a pound: how many pounds did it take?

23. How many dozen eggs, at 12 cents a dozen, will pay for l0 10/11 pounds of sugar, at 11 cents a pound?

LESSON 68

Name _____

INTELLECTUAL LESSON 37 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. Mary, having 1/2 an orange, gave her brother 1/2 of what she had: what part of an orange did she give him?

2. James divided 1/3 of an apple equally between his two brothers: what part did each receive?

3. If 1/4 of an orange is divided into 2 equal parts, what is 1 of the parts called?

4. If 1/3 of an apple be cut into 3 equal parts, what part of the apple will each piece be?

5. If 1/2 of an apple be divided into 5 equal parts, what is each part called?

6. If. you divide an orange into 4 equal parts, and cut each part into 3 equal pieces, what will 1 piece be called?

7. What single fraction equals 1/2 of 1/7?

8. What single fraction equals:
    a. 1/3 of 1/5?

    b. 1/4 of 1/4?

    c. 1/3 of 1/6?

    d. 1/4 of 1/5?

    e. 1/3 of 1/7?

9. What single fraction equals:
    a. 1/4 of 1/6?

    b. 1/3 of 1/8?

    c. 1/5 of 1/5?

d. 1/3 of 1/9?

e. 1/4 of 1/7?

f. 1/5 of 1/6?

10. What single fraction equals:
    a. 1/4 of 1/8?

    b. 1/5 of 1/7?

    c. 1/6 of 1/6?

    d. 1/7 of 1/7?

    e. 1/8 of 1/8?

    f. 1/9 of 1/9?

11. Thomas has 3/4 of an apple, and wishes to give his brother 1/2 of what he has: what part of the whole apple must he give him?

12. Daniel has 3/5 of a melon to divide equally between his brother and sister: how must he divide it, and what part of the whole will each receive?

13. What is 1/3 of 2/5?

14. What is:
    a. 1/3 of 5/6?

    b. 1/4 of 3/4?

    c. 1/5 of 5/6?

    d. 1/6 of 3/4?

15. What is:
    a. 1/6 of 4/7?

b. 1/7 of 5/8?

c. 1/9 of 5/7?

d. 1/7 of 4/5?

16. What is:
    a. 1/8 of 4/9?

    b. 1/9 of 5/9?

    c. 1/10 of 7/9?

    d. 1/11 of 8/9?

17. Edward has 4/5 of a melon, and gives his sister 2/3 of what he has: what part of the melon does she receive?

18. What are 2/3 of 3/4?

19. What are:
    a. 2/3 of 3/5?

    b. 3/4 of 6/5?

    c. 2/3 of 5/6?

    d. 3/4 of 2/7?

20. What are:
    a. 3/5 of 3/8?

    b. 2/5 of 3/7?

    c. 5/6 of 4/7?

    d. 2/3 of 7/10?

21. What are:
    a. 3/5 of 8/9?

    b. 2/5 of 3/7?

    c. 3/8 of 5/7?

    d. 5/7 of 4/9?

22. What are:
    a. 3/2 of 5/6?

    b. 6/5 of 2/9?

    c. 9/10 of 7/6?

    d. 7/8 of 4/3?

23. What are:
    a. 9/8 of 7/5?

b. 8/3 of 11/7?

c. 11/12 of 5/6?

d. 6/5 of 12/11?

24. A person, owning 3/4 of a ship, sold 5/6 of his share: what part of the ship did he sell?

25. A banker, owning 4/5 of the entire stock of a bank, disposed of 3/7 of his share: what part of the stock did he sell?

26. If a man sells 2/9 of 7/10 of his stock of merchandise, what amount does he sell?

27. I buy 8/11 of 2/3 of the shares in a corporation, how much do I buy?

28. 4/3 of 6/7 of 5/12 are how many?

LESSON 69

Name _____

INTELLECTUAL LESSON 38 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. If 1 yard of cloth is worth 2 1/2 bushels of wheat, what is 1/2 a yard worth?

2. What single fraction will represent:
   a. 1/3 of 2 1/2?

   b. 1/2 of 1 1/4?

   c. 1/3 of 1 3/4?

   d. 1/4 of 2 1/5

   e. 1/5 of 3 1/4?

3. What single fraction will represent:
    a. 1/6 of 4 2/3?

    b. 1/7 of 5 1/6?

    c. 2/3 of 1 1/2?

    d. 3/4 of 1 2/3?

    e. 2/7 of 1 1/3?

4. What single fraction will represent:
    a. 2/5 of 4 1/3?

    b. 3/5 of 2 2/7?

    c. 5/8 of 3 1/2?

    d. 3/8 of 2 1/8?

e. 3/7 4 5/9?

5. If 2 yards of cloth cost $1 1/3, what will 3 yards cost?

6. If 3 yards of cloth cost $5 1/2, what will 2 yards cost?

7. If 4 gallons of molasses cost $3 2/3, what will 3 gallons cost?

8. If 7 pounds of sugar cost $1 1/4, what will 4 pounds cost?

9. If 4 pounds of butter cost $1 1/4, what will 7 pounds cost?

10. If 7 yards of cloth cost $5 3/5, what will be the cost of:
    a. 3 yards?

    b. 4 yards?

11. If 2 barrels of cider cost $4 2/3, what part of that sum will 5 barrels cost?

12. If 5 gallons of oil cost $2 2/5, what part of that sum will 7 gallons cost?

13. If 3 bottles of wine cost $2 1/3, what will be the cost of:
    a. 8 bottles?

    b. 10 bottles?

14. A man can perform a piece of work in 3 2/3 days, of 10 hours each: how many days, of 7 hours each, will it take?

15. If a man can do a piece of work in 14 2/5 days, working 5 hours a day, how many days will it take, working 8 hours a day?

LESSON 70

Name _____

INTELLECTUAL LESSON 39 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. A jockey, by selling a horse for $45, gained 1/8 of the cost: what was the cost?

2. James gave his brother 4 marbles, which were 2/3 of all he had: how many had he?

3. Thomas sold a knife for 15 cents, which was 3/5 of its cost: how much did it cost?

4. William lost 6 marbles, which were 3/8 of all he had: how many had he?

5. I sold a horse for $42, which was 6/5 of its cost: what was its cost?

6. A grocer sold a lot of flour for $40, which was 5/4 of the cost: what was the cost?

7. Sold a horse for $56, which was 8/5 of the cost: what was the cost?

8. A man sold a watch for $28, which was 4/3 of its cost: what was its cost?

9. A man sold a pony for $45, which was 5/3 of its cost: what was the cost?

10. A man purchased a horse: after paying 3/5 of the price, he owed $20: what was the price of the horse? How much money did he pay?

11. Alexander sold a book for 25 cents, and lost 2/7 of the cost: what was the cost?

12. In an orchard there are 12 cherry trees: the remaining 5/7 of the orchard are apple trees: how many trees are there in the orchard?

13. Four-fifths of a stick are under water, and 6 feet are out of water: how long is the stick?

14. There is a pole, 3/5 of which are in the earth, and 12 feet are in the air: how long is the pole?

15. A piece of timber stands 5/7 in the air, and 5 feet in the ground: how long is the entire piece?

16. 1/5 of a pole is in the mud, 2/5 are in the water, and 14 feet in the air: how long is the pole?

17. A man gave to some poor persons $4, which was 2/5 of his money: how much had he left?

18. At $8 a yard, 1/5 of the cost of a piece of cloth was lost: what was the cost?

19. If 8/5 of the cost of a horse were $64, and it was bought with flour, at $4 a barrel: how many barrels did it take?

20. If 7/9 of a cask of wine cost $42, how much flour, at $8 a barrel, will pay for a whole cask?

21. If 4/5 of a yard of muslin cost 8 cents, how many yards can be purchased for 25 cents?

22. If 6/7 of a yard of cloth cost $4, how many yards can be purchased for $12?

23. By selling 5 yards of cloth for $12, I gained 1/3 of the cost: what did I pay per yard ?

24. If 3/4 of a pound of raisins cost 9 cents, how many lemons, at 2 cents each, will pay for a pound?

25. If 2/3 of a pound of coffee cost 16 cents, how many oranges, at 4 cents each, will pay for one pound?

26. If 7/8 of a barrel of wine cost $42, how many barrels of cider, at $6 each, will pay for a barrel of wine?

27. If 3/5 of a barrel of sugar cost $12, how many barrels of flour, at $10 a barrel, will pay for a barrel of sugar?

28. Sold a horse for $50, which was 5/8 of his cost: paid for him with cloth, at $4 a yard : how many yards did I give?

LESSON 71

Name _____

INTELLECTUAL LESSON 40 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. 12 is 4/7 of how many times 5?

2. 18 is 3/8 of how many times 9?

3. 16 is 2/7 of how many times 9?

4. 36 is 4/7 of how many times 8?

5. 45 is 5/9 of how many times 7?

6. 24 is 4/8 of how many times 5?

7. 72 is 8/5 of how many times 7?

8. 81 is 9/4 of how many times 3?

9. 50 is 10/7 of how many times 4?

10. 63 is 7/6 of how many times 5?

11. 56 is 8/3 of how many times 7?

12. A man, having 12 bushels of grain, divided 5/6 of it among 3 poor persons equally: how many bushels did each receive?

13. A boy, having 25 apples, kept 1/5 himself, and divided the other 4/5 equally among 6 companions: how many did each receive?

14. 3/4 of 24 are how many times 9?

15. 7/4 of 24 are how many times 8?

16. 8/3 of 18 are how many times 6?

17. 7/3 of 27 are how many times 10?

18. 3/5 of 60 are how many times 7?

19. 5/6 of 66 are how many times 8?

20. 5/8 of 48 are how many times 9?

21. 3/7 of 56 are how many times 9?

22. 9/7 of 63 are how many times 10?

23. 5/8 of 64 are how many times 6?

24. 5/6 of 40 are how many times 7?

25. 11/7 of 49 are how many times 8?

26. 5/6 of 54 are how many times 7?

27. 10/9 of 63 are how many times 8?

28. 8/9 of 54 are how many times 5?

29. 9/7 of 42 are how many times 8?

30. 7/11 of 55 are how many times 6?

31. 3/4 of 72 are how many times 10?

32. 2/3 of 96 are how many times 11?

LESSON 72

Name _____

PRACTICAL ARTICLE 118 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems. What will be the cost:

1. Of 2 1/3 lb. of meat, at 13 1/5 ct. a lb.?

2. Of the specified amount linen, at $2/3 a yd.:
   a. 3 yd.?

   b. 5 yd.?

   c. 7 yd.?

   d. 6 1/2 yd.?

   e. 5 3/4 yd.?

3. Of 3 1/3 lb. of rice, at 4 4/5 ct. a lb.?

4. Of 3 1/5 tons of iron, at $18 3/4 per T.?

5. Of 1 2/3 yd. of muslin, at $3/20 per yd.?

6. Of 2 1/2 lb. of tea, at $4/5 per lb.?

7. Of 5 5/9 cords of wood, at $1 1/4 per C.?

8. At the rate of 5 1/2 miles an hour, how far will a man travel in 7 3/4 hours?

9. I own 2/3 of a steamboat, and sell 3/5 of my share what part of the boat do I sell?

10. At $6 3/4 per yard, what cost 2/9 of a piece of cloth containing 5 1/2 yards?

11. 3/7 of 5/9 of 16 1/2 * 2/3 of 7/8 of 15 = what?

12. What is the sum of 2/3 + 3/4 and 2/3 * 3/4?

LESSON 73

Name _____

TEST ARTICLE 118 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. Of 3 3/4 lb. of sugar, at 8 1/3 ct. a lb.

2. Of 5 yd. muslin, at 11 1/4 ct. a yd.

3. Of 7 3/4 lb. cheese, at 8 1/3 ct. a lb.

4. Of 312 1/2 lb. of brass, at 27 1/5 ct. a lb.

5. Of 4 2/3 yd. of fence, at $2 2/5 a yd.

6. Of 17 1/2lb. of coffee, at $3/8 a lb.

7. Of 2 2/5 mi. of road, at $17200 a mi.

8. Of 18 bu. of potatoes, at $3/5 a bu.

9. Of 38 3/4 lb. of steel, at 12 1/2 ct, a lb.

10. Of 6 3/4 lb. of rice, at 6 2/3 ct. a lb.

11. Of 13 1/3 oz. of copper wire, at 7 1/2 ct. an oz.

12. Of 4728 lb. of pork, at 3 3/4 ct. a lb.

13. From 1/2 of l7 1/3 take 1/3 of 17 1/2.

14. To 3/4 of 5 2/3, add 4/7 of 5 3/4.

15. Multiply 4/5of 7 1/3 by 3/4 of 7 1/5.

16. How far can a boat move in 6 3/5 hours, at the rate of 13 1/2 miles per hour?

17. What cost 8 1/5 T. of hay, at $16 2/3 a T.?

18. A man owning 47 1/2 A. of land, sold 3/5 of it; how many acres has he remaining?

19. A man had 25 5/6 cords of wood, and burned 5/8 of it; how much remains?

20. What cost 8000 torches at 1/5 ct. each?

21. What would be the value of 2/7 of a farm of 58 1/3 acres, at $7 1/2 an acre?

22. A man earned $7 1/2 a week, for 6 5/8 weeks, and saved 1/4 of his wages; how much did he save?

23. An iron bar was 8 1/4 feet long; 1/5 of it being broken off, the remainder was sold for 2 1/2 ct. a lb. How much was received for it, the weight being 8 1/3 lb. per foot?

24. A had 57 1/3 acres; B, 49 1/5 acres; each gave the other 1/3 of his own laud; how much more had A then than B?

LESSON 74

Name _____

PRACTICAL ARTICLE 119 Date _____

OBJECTIVE(S)

- Find the quotient of two fractional numbers

Directions: Children complete the following division word problems.

1. If 3 yards of ribbon cost 6/7 of a dollar, what will 1 yard cost?

2. At 2 dollars a yard, what part of a yard of cloth can be bought for 3/5 of a dollar?

3. At 2/3 of a cent for 1 apple, how many can be bought for 4 cents?

4. At 2/3 of a cent for 1 apple, how many apples can be bought for 3/4 of a cent?

5. Divide 3/4 by 4/5.

6. If 4 yards of muslin cost 8/9 of a dollar, what will 1 yard cost?

7. At 1/2 a cent each, how many apples can be bought for 3 cents?

8. At 1/5 of a dollar per yard, how many yards of muslin can be bought for $9/10?

9. If 1 orange cost 3 cents, what part of an orange could be purchased for 1/2 a cent?

10. At 3/4 of a dollar per yard, how many yards of cloth can you buy for 6 dollars?

11. At 1/5 of a dollar per yard, how many yards of ribbon can be purchased for 3/4 of a dollar?

12. If 7 pounds of rice cost 14/25 of a dollar, what will 1 pound cost?

13. Divide 4 1/2 by 1 1/3.

14. Divide 2 2/5 by 6.

15. Divide 22 by 5 1/2.

16. Divide 2 1/2 by 1/16.

17. Divide 4 4/5 by 8.

18. Divide 6 by 2 2/5.

19. Divide 4 3/4 by 5 1/8.

20. Divide 12 4/7 by 11.

21. Divide 30 by 3 3/4.

22. Divide 2 1/4 by 7 1/2.

23. Divide 3 2/3 by 7.

24. Divide 50 by 4 3/7.

25. Divide 1/2 by 1/50.

26. Divide 47 2/5 by 15.

27. Divide 56 by 5 4/9.

28. Divide 14/15 by 21.

29. Divide 130 2/3 by 18.

30. Divide 1/2 of 2/3 by 3/4 of 4/5.

31. Divide 3/5 of 8/9 of 6/7 of 3/4.

32. Divide 1/3 of 5 1/8 by 3/4 of 17 1/2.

33. Divide 5/18 of 2/5 of 12 3/10 by 1/5 of 8 1/5.

34. Divide 2/7 of 7/8 by 3/4 of 1/3 of 5.

35. Divide 5/18 of 2/5 of 12 3/10 by 1/5 of 4 1/10 of 20.

LESSON 75

Name _____

TEST ARTICLE 119 Date _____

OBJECTIVE(S)

- Find the quotient of two fractional numbers

Directions: Solve the following division problems.

1. Divide 7/8 by 3/4.

2. Divide 3/4 by 7/8.

3. Divide 9 1/4 by 6 1/6.

4. Divide 18 1/3 by 2 3/4.

5. Divide 17 7/9 by 5/6.

6. Divide 3/8 by 20.

7. Divide 4 1/4 by 4 1/5.

8. Divide 19 3/10 by 3 3/5.

9. Divide 2 1/5 by 5 1/2.

10. Divide 13 1/13 by 4 1/4.

11. Divide 27 1/2 by 1 4/7.

12. Divide 2 2/9 by 8 1/3.

13. Divide 19 1/5 by 4 4/11.

14. Divide 18 3/7 by 4 3/10.

15. Divide 180 by 3 5/7.

16. Divide 2/5 by 25.

17. Divide 800 by 8/17.

18. Divide 15 9/11 by 4 1/7.

19. Divide 18 5/9 by 13 1/3.

20. Divide 7 1/7 by 1 1/4.

21. Divide 3 1/3 by 4 1/5.

22. Divide 675 by 1 4/5.

23. Divide 39 1/10 by 4 1/4.

24. Divide 396 1/3 by 4 1/6.

25. Divide 13 1/5 by 47 2/3.

26. Divide 8 4/5 by 400.

27. Divide 67 3/8 by 3 1/7.

28. Divide by 6 2/3 by 11 1/9.

29. Divide by 44589 by 39 5/9.

30. Divide 347 1/3 by 123 5/8.

31. What cost 1 egg, at 17J ct. a dozen?

32. If 7 men earn $243 1/2, what will each man's share be?

33. A farm of 287 3/4 acres was divided among 5 children; what would be the share of each?

34. How much silk could be bought for $1/4, at $3 a yard?

35. If 4 1/2 lb. cheese cost 80 ct., find the cost of 1 lb.

36. At 4 3/10 ct. a lb., how many pounds of rice can be bought for 75 ct.?

37. How much coffee, at 37 1/2 ct. a pound, can be bought for 10 ct.?

38. How many apples, at 1/3 ct. each, can be bought for 15 cents?

39. How much saffron, at $16 an ounce, can be bought for $ 2/5?

40. If 1 1/3 oz. of quinine cost $4 1/4, how much is that per ounce?

41. At $2 2/5 per day, how many days must a man work to earn $22 1/2?

42. How much must a man charge per hour to receive $1 3/5 for 9 1/2 hours?

43. How many yards of muslin, at 6 2/9 ct. a yd., can be bought for 80 ct.?

44. If 2 2/5 lb. of butter cost $1 1/4, how many pounds can be bought for $4 1/2?

45. A man chops 14 1/2 C. in 4 3/5 da.; how long will it take him to chop 23 1/5 C.?

LESSON 76

Name _____

PRACTICAL ARTICLE 120 Date _____

OBJECTIVE(S)

- Find the quotient of two fractional numbers

Directions: Children complete the following division word problems.

1. 1 is what part of 2?

2. 2 is what part of 3?

3. 1/2 is what part of 3?

4. 2/3 is what part of 3/4?

5. 3 is what part of 4?

6. 3/4 is what part of 5?

7. 1/4 is what part of 1/2?

8. 2/3 is what part of 5/6?

9. 3 3/4 is what part of 5?

10. 5/6 is what part of 8/9?

11. 8 5/9 is what part of 11?

12. 21/32 is what part of 35/48?

LESSON 77

Name _____

TEST ARTICLE 120

Date _____

OBJECTIVE(S)

- Find the quotient of two fractional numbers

Directions: Solve the following division problems.

1. 7 1/2 is what part of 20?

2. 16 2/3 is what part of 62 1/2?

3. 4/7 is what part of 28?

4. 4 2/5 is what part of 5 1/13?

5. 7 3/10 is what part of 10 3/7?

6. 8 3/4 is what part of 105?

7. 19 5/7 is what part of 30 2/3?

8. 84 6/7 is what part of 90 3/4?

9. What part of 102 is 4 1/4?

10. What part of 77 7/9 is 3 4/7?

11. What part of 91 2/3 is 13 3/4?

12. What part of 19 4/5 is 3 6/7?

13. 4/5 of 16 2/3 is what part of 5/9 of 34 2/7?

14. 7/8 of 33 1/2 is what part of 3/4 of 50 1/4?

15. 19/20 of 19/20 is what part of 3/10 of 90 1/4?

16. 1/30 of 30 1/3 is what part of 1/10 of 20 4/5?

LESSON 78

Name _____

PRACTICAL ARTICLE 121 Date _____

OBJECTIVE(S)

- Reduce complex fractions to simple fractions by division

Directions: Children complete the following division word problems.

1. Reduce $\frac{1\ 1/4}{2\ 1/3}$ to a simple fraction.

2. Reduce $\frac{6/7}{11/5}$ to a simple fraction.

3. Reduce $\frac{2/3}{5}$ to a simple fraction.

4. Reduce $\frac{2}{3\ 2/3}$ to a simple fraction.

5. Reduce $\frac{3\ 1/8}{4\ 5/7}$ to a simple fraction.

6. Reduce $\frac{2\ 1/3}{4\ 1/2}$ to a simple fraction.

7. Reduce $\frac{3\ 3/4}{5\ 5/8}$ to a simple fraction.

8. Reduce $\frac{9\ 7/9}{2\ 1/27}$ to a simple fraction.

9. Reduce $\frac{8\ 3/4}{5\ 5/8}$ to a simple fraction.

10. Reduce $\frac{7\ 5/6}{8\ 9/11}$ to a simple fraction.

LESSON 79

Name _____

TEST ARTICLE 121

Date _____

OBJECTIVE(S)

- Reduce complex fractions to simple fractions by division

Directions: Solve the following division problems.

1. $\dfrac{4\ 1/2}{5\ 5/7}$

2. $\dfrac{9\ 1/3}{9\ 4/5}$

3. $\dfrac{17\ 3/5}{24\ 3/4}$

4. $\dfrac{3/8}{15\ 5/7}$

5. $\dfrac{4}{19\ 3/11}$

6. $\dfrac{18\ 5/12}{37\ 2/5}$

7. $\dfrac{13\ 3/5}{4\ 1/4}$

8. $\dfrac{7/8}{19\ 1/3}$

9. $\dfrac{15\ 3/8}{51\ 2/3}$

10. $\begin{array}{r} 8\ 4/7 \\ \hline 84 \end{array}$

11. $\begin{array}{r} 69\ 3/8 \\ \hline 95\ 1/7 \end{array}$

12. $\begin{array}{r} 46\ 1/2 \\ \hline 69\ 3/4 \end{array}$

13. $\begin{array}{r} 23\ 1/3 \\ \hline 75\ 1/4 \end{array}$

14. $\begin{array}{r} 48\ 4/9 \\ \hline 109 \end{array}$

15. $\begin{array}{r} 53\ 4/9 \\ \hline 120\ 1/4 \end{array}$

LESSON 80

Name _____

INTELLECTUAL LESSON 41 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. At $1/2 a yard, how much cloth can be bought for $1/3?

2. At $1/3 a yard, how much gingham can be purchased for $1/4?

3. At $1/2 a yard, how much alpaca can be purchased for $1/5?

4. At $1/3 a bushel, how much corn can be bought for $1/5?

5. At $2/3 a yard, how much cloth can be purchased for $3/4?

6. If a pound of coffee is worth $2/5, how much can John buy for $2/3.

7. If a pound of tea cost $4/5, how much tea can you purchase for $2/3?

8. At $2/5 for one yard, how much cloth can be bought for:
   a. $3/4

   b. $5/6

   c. $1

9. One bushel of rye is worth 3/4 of a bushel of wheat. How much rye is worth:
   a. 4/5 of a bushel of wheat?

   b. 1 bushel?

10. Divide 1/5 by 1/4.

11. Divide 1/6 by:
   a. 1/5

   b. 1/4

c. 1/3

12. Divide 1/7 by:
    a. 1/6

    b. 1/5

    c. 1/4

13. Divide 1/8 by:
    a. 1/7

    b. 1/6

    c. 1/9

14. Divide 4/5 by 2/3.

15. Divide 4/5 by 3/4.

16. Divide 5/6 by:
    a. 4/5

    b. 3/4

    c. 2/3

17. Divide 6/7 by:
    a. 5/6

    b. 4/5

    c. 3/4

18. Divide 7/8 by:
    a. 6/7

    b. 5/6

c. 4/5

19. Divide 7/8 by 7/8

20. Divide 8/9:
    a. 7/8

    b. 6/7

    c. 5/6

21. Divide 9/10 by:
    a. 8/9

    b. 7/8

    c. 6/7

22. Divide 10/11 by:
    a. 9/10

    b. 8/9

    c. 7/8

23. Divide 11/12 by:
    a. 10/11

    b. 9/10

    c. 8/9

24. Divide:
    a. 6/5 by 2/3

    b. 7/6 by 3/4

c. 8/7 by 4/5

25. Divide:
    a. 4/3 by 5/8

    b. 9/8 by 4/7

    c. 9/6 by 6/9

26. Divide:
    a. 10/9 by 10/11

    b. 11/10 by 10/12

    c. 12/11 by 7/8

27. Divide:
    a. 8/3 by 8/5

    b. 7/4 by 7/8

    c. 6/5 by 5/6

28. Divide:
    a. 12/7 by 11/7

    b. 10/9 by 2/5

    c. 11/3 by 6/5

LESSON 81

Name _____

INTELLECTUAL LESSON 42 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. A man, having 10 2/7 acres of land, divided it equally among his 6 children: how much did each receive?

2. If 2 4/5 be divided by 7, what will be the result?

3. How many times is 6 contained in 3 3/5?

4. How many times is 9 contained in 6 3/4?

5. Divide:
   a. 8 3/4 by 5

   b. 7 2/4 by 10

6. Divide:
    a. 4 5/7 by 11

    b. 8 4/7 by 12

7. If 1 1/2 yards of ribbon cost 6 cents, what will 1 yard cost?

8. If 1 1/8 yards of cloth cost $4, what will 1 yard cost?

9. If a man travel 9 miles in 1 2/7 hours, how far will he travel in 1 hour?

10. A watch was sold for $18, which equaled 1 1/5 of what it cost me: how much did it cost?

11. A grocer sold a lot of flour for $25, which was 1 1/4 times the cost:
    a. What did it cost?

    b. How much did he gain?

12. If a man pays $6 for 1 1/3 yards of cloth, what is the cost of 1 yard?

13. If a man receives $10 for 2 2/3 days work, how much is that a day?

14. If a man receives $12 for 6 2/5 days work, how much is that a day?

15. How many are 9 divided by 3 3/4?

16. How many are 10 divided by 2 1/7?

17. How many are 11 divided by 4 8/9?

LESSON 82

Name _____

INTELLECTUAL LESSON 43 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. If a yard of cloth cost $2/3, how many yards will cost $4 6/7?

2. When a bushel of corn costs $1/2, how many bushels can you buy for $1 1/2?

3. I distributed 2 2/3 bushels of wheat among a number of poor persons, giving to each 2/3 of a bushel: how many persons were there?

4. At $1/4 a yard, how many yards of alpaca can be purchased for $3 3/4?

5. At $3/4 a yard, how many yards of cloth can be purchased for $3 1/4?

6. If an apple cost 3/4 of a cent, how many apples can be purchased for:
   a. 3 3/4 cents?

   b. 5 1/4 cents?

7. If a yard of cloth cost $2/3, how many yards can you purchase for $4 1/3?

8. How often is 1 1/2 contained in:
   a. 3/4?

   b. 4/5?

   c. 2 3/4?

9. How often is 2 1/4 contained in:
   a. 5/6?

   b. 5/7?

   c. 3 7/8?

10. How often is 3 1/5 contained in:
    a. 3/8?

    b. 3/7?

c. 5 3/5?

11. 5 1/3 is:
    a. 1/2 of what number?

    b. 1/5 of what number?

12. 7 3/4 is:
    a. 1/3 of what number?

    b. 1/7 of what number?

13. 9 2/3 are:
    a. 5/8 of what number?

    b. 5/6 of what number?

14. 4 2/3 are:
    a. 2/5 of what number?

b. 5/6 of what number?

15. 3 2/3 are:
    a. 3/4 of what number?

    b. 3/5 of what number?

16. How often is 1/6 contained in:
    a. 3 5/6?

    b. 5 1/6?

    c. 4 4/6?

17. How often are 3/5 contained in:
    a. 2 2/5?

    b. 4 3/5?

    c. 6 1/5?

18. How often are 3/7 contained in:
    a. 3 5/6?

    b. 4 2/3?

    c. 7 3/4?

19. How often are 5/8 contained in:
    a. 4 3/4?

    b. 5 3/5?

    c. 8 4/7?

20. How often are 2/3 contained in:
    a. 2 3/10?

    b. 6 9/11?

    c. 9 5/12?

d. 10 2/3?

21. At $2/5 a gallon, how many gallons of vinegar can you buy for:
    a. $2 2/5?

    b. $4 1/5

22. One bushel of rye is worth 3/4 of a bushel of wheat: how many bushels of rye can be bought with:
    a. 4 1/2 bushels of wheat?

    b. 8 1/4 bushels?

LESSON 83

Name _____

INTELLECTUAL LESSON 44 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems using the table below, where applicable.

I.—Fractional Parts of 12.

$2 = \frac{1}{6}$ $\quad$ $6 = \frac{1}{2}$.
$3 = \frac{1}{4}$ $\quad$ $8 = \frac{2}{3}$.
$4 = \frac{1}{3}$ $\quad$ $9 = \frac{3}{4}$.
$10 = \frac{5}{6}$.

II.—Fractional Parts of 100.

$12\frac{1}{2} = \frac{1}{8}$ $\quad$ $37\frac{1}{2} = \frac{3}{8}$.
$16\frac{2}{3} = \frac{1}{6}$ $\quad$ $50 = \frac{1}{2}$.
$20 = \frac{1}{5}$ $\quad$ $62\frac{1}{2} = \frac{5}{8}$.
$25 = \frac{1}{4}$ $\quad$ $66\frac{2}{3} = \frac{2}{3}$.
$33\frac{1}{3} = \frac{1}{3}$ $\quad$ $75 = \frac{3}{4}$.
$87\frac{1}{2} = \frac{7}{8}$.

1. Bought 3/4 of a dozen shirts, at $24 a dozen: what did they cost??

2. Bought 2/3 of a dozen linen collars, at $3 a dozen: what did they cost?

3. Bought 5/6 of a dozen handkerchiefs, at $4 a dozen: how much did they cost?

4. A grocer bought 6 1/2 dozen eggs, for 16 cents a dozen: how much did they cost?

5. Bought 1 2/3 dozen pairs of hose, for $2 2/5 a dozen: how much did they cost? What did each pair cost?

6. Bought 2 1/4 dozen copybooks, for $1 1/5 a dozen: how much did they cost? What was the cost of each book?

7. A merchant bought 6 1/2 dozen knives, for $1 4/5 a dozen: what did they cost? What did 1 knife cost?

8. Paid $5 a set, or 1/2 dozen, for 2 1/2 dozen spoons: what did they cost?

9. Bought 4 1/6 dozen spelling books, at $2 1/4 a dozen: how much did they cost? What did 1 book cost?

10. A man bought 2 1/4 dozen handkerchiefs, for $6 3/4: how much was that apiece?

11. A merchant paid $3 1/10 for 7 3/4 dozen pairs of damaged hose, and sold them for $1/10 a pair: how much did he gain on each pair?

12. A merchant paid $15 for 2 1/2 dozen silk handkerchiefs, and sold them for $3/5 apiece: how much did he gain on each handkerchief? How much on the whole lot?

13. Paid $18 3/4 for 6 1/4 dozen knives, and sold them for $2 1/10 a set, or 1/2 doz.: how much did I gain?

14. What will 16 pounds of soap cost, at 12 1/2 cents a pound?

15. What will 12 pounds of prunes cost, at 16 2/3 cents a pound?

16. What will 24 yards of alpaca cost, at 37 1/2 cents a yard?

17. What will 16 yards of flannel cost, at 62 1/2 cents a yard?

18. What will 15 pounds of coffee cost, at 33 1/3 cents a pound?

19. What will 27 yards of flannel cost, at 66 2/3 cents a yard?

20. What will 15 yards of cloth cost, at $1.66 2/3 a yard?

21. Paid $12 for coffee, at 33 1/3 cents a pound: how many pounds did I buy?

22. Paid $1 1/4 for eggs, at 12 1/2 cents a dozen : how many dozen did I buy?

23. Paid $7 1/2 for flannel, at 62 1/2 cents a yard: how many yards did I buy?

24. Paid $8 for flannel, at 66 2/3 cents a yard: how many yards did I buy?

25. Multiply 32 by 12 1/2.

26. Multiply:
    a. 18 by 50

    b. 40 by 62 1/2

    c. 68 by 75

27. Multiply:
    a. 48 by 75

    b. 24 by 37 1/2

    c. 51 by 33 1/3

28. Multiply:
    a. 39 by 66 2/3

    b. 64 by 87 1/2

    c. 96 by 62 1/2

29. Divide 150 by 12 1/2

30. Divide:
    a. 200 by 16 2/3

    b. 560 by 20

    c. 250 by 25

31. Divide:
    a. 350 by 37 1/2

    b. 600 by 50

    c. 750 by 62 1/2

LESSON 84

Name _____

PRACTICAL ARTICLE 122 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. At 1/2 a dollar per yard, how many yards of silk can be bought for $3 1/4?

2. At 3/5 of a dollar per pound, how many pounds of tea can be purchased for $2 3/10?

3. At 3 3/4 dollars per yard for cloth, how many yards can be purchased with $42 1/2?

4. By what must 3/5 be multiplied that the product may be 10?

5. Divide 3 3/7 by 3/7 of 1 1/2.

6. Divide 4/11 of 27 1/2 by 3/10 of 21 1/4.

7. Multiply $\frac{1\ 1/2}{2\ 1/3}$ by $\frac{3/7}{4\ 1/2}$.

8. Multiply $\frac{7\ 8/15}{9\ 5/12}$ of $\frac{2\ 1/9}{3\ 2/15}$ by $\frac{1\ 1/4}{5/6}$.

9. Divide $\frac{1\ 1/2}{2/3}$ by $\frac{2\ 2/5}{2\ 1/6}$.

10. Divide $\frac{1\ 2/3}{2\ 1/2}$ by $\frac{5\ 1/7}{84\ 6/7}$.

LESSON 85

Name _____

TEST ARTICLE 122 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. By what must 7 1/5 be multiplied, to give the product 20 1/4?

2. By what must 7 1/5 be divided to make the quotient 2 1/4?

3. How many pounds of sugar can be bought for 42 1/2 ct., at 9 1/3 ct. a lb.?

4. Bought 5 3/5 A. of land for $77; what was the price per A.?

5. Divide 2/3 of $\frac{5\ \ 2/5}{7\ \ 7/8}$ by 2/5 of $\frac{3\ \ 1/7}{4\ \ 2/5}$.

6. I had 23 3/4 A. of land, and sold 5/7 of it for $1045; how much was that per A.?

7. If 2 1/2 yd. of cloth cost $3 1/2, how much can be bought for $4 1/2?

8. If 2 1/2 lb. of honey cost $3/4, how much can be bought for $10 1/10?

9. How often will $\frac{5\ 1/4}{2\ 1/3}$ contain $\frac{2\ 1/4}{5\ 1/3}$?

10. A boy had $4/5, and spent 2/5 of it for cherries; how many straps, at $3/50 each, can he buy with the balance of his money?

11. I am offered 14 1/3 A. for $103 1/5; I have only $100; how many acres should I receive for my money?

12. Divide $\frac{3\ 3/7}{8\ 4/5}$ by $\frac{13\ 1/3}{9\ 3/7}$.

13. I had $43 2/10, which I paid for gold at $9/10 a pwt.; I had the gold made into rings weighing 1 1/5 pwt. each; how many rings were made?

14. By what must $\frac{3\ 8/9}{5\ 3/5}$ be divided to make a quotient equal to $\frac{1\ 1/3}{3\ 3/4}$?

15. By what must 10 be multiplied, so that the product may be 1/10?

16. I had 4 4/7 bl. of glue, and gave 1/3 of my lot to my brother for $25 3/5; how much was that per bl.?

17. If 7 7/8 yd. of cloth cost $16 4/5, how many yards can be purchased for $28 4/9?

LESSON 86

Name _____

PRACTICAL ARTICLE 123 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems using the table below, where applicable.

1. Add $16 1/6, $9 1/8, $5 7/16, and $2 13/16.

2. I paid for books $9 1/8, for paper, $4 7/16, for a slate, $3/8, for pens, $1 5/8, what amount did I expend?

3. Having $50 1/4, I paid a bill of $27 3/16: how much had I left??

4. From $32.31 1/4 take $15.12 1/2.

5. From $5.81 1/4 take $1.18 3/4.

6. Find the cost of 9 yd. of muslin, at 12 1/2 ct. a yd?

7. Find the cost of 21 lb. of sugar, at 6 1/4 ct. a lb.

8. Find the cost of 15 yd. of cloth, at $3.18 3/4 per yd.

9. Find the cost of 5 1/2 yd. of linen, at $0.62 1/2 per yd.

10. Find the cost of 12 1/2 yd. of ribbon, at 18 3/4 ct. per yd.

11. Find the cost of 13 1/2 yd. of calico, at 16 2/3 ct. per yd.

12. Find the cost of 10 1/4 yd. of cloth, at $3.37 1/2 a yard.

13. Find the cost of 17 2/3 dozen books, at $3.75 per dozen.

14. At 18 3/4 ct. per yard, how many yards of muslin can be purchased for $2.25?

15. At 37 1/2 ct. per bushel, how many bushels of barley can you buy for $5.81 1/4?

16. If 5 yards of cloth cost $11.56 1/4, what cost one yard?

17. Seven men share $31.06 1/4 equally: what is the share of each man?

18. Reduce 5 mi. to inches.

19. Reduce 2 mi. 2 rd. 2 ft. to feet.

20. Reduce 20 yd. to rods.

21. Reduce 15875 ft. to miles.

22. Reduce 142634 in. to miles.

23. How many steps, of 2 ft. 8 in. each, will a man take in walking 2 miles?

24. How many revolutions will a wheel, of 9 ft. 2 in. circumference, make in running 65 miles?

25. Reduce 1 A. 136 sq. rd. 25 sq. yd. to square yards.

26. Reduce 7506 sq. yd. to A.

27. Reduce 5 chains 15 links to in.

28. How many acres in a field 40 1/2 rd. long and 32 rd. wide?

29. Reduce 4 years to hours.

30. Reduce 914092 hr. to cen.

31. In what time will a body move from the earth to the moon, at the rate of 31 miles per day, the distance being 238545 miles?

LESSON 87

Name _____

TEST ARTICLE 123 Date _____

OBJECTIVE(S)

- Complete word problems involving fractional compound numbers.

Directions: Children complete the following word problems.

1. How many yards in 24 rd.?

2. How many sq. yd. in 1 A.?

3. How many years in 14690 days?

4. What cost 14 1/6 lb. of coffee at 27 ct. a lb.?

5. Reduce 84 sq. rd. to sq. ft.

6. What cost 112 3/4 yd. of paving, at $8 4/5 per rod.?

7. A field is 37 1/3 rd. long, and 25 1/2 rd. wide; how many sq. rd. in it?

8. What cost 1463 yd. of telegraph wire, at 20 ct. a rod?

9. How much will 43560 sq. yd. of land cost at $13.75 an acre?

10. What cost 51 1/2 bu. of wheat at 16 1/4 ct. a peck?

11. Reduce 12 yr. 300 da. to hr.

12. Find the cost of 17 1/2 yd. of silk, at 87 1/2 ct. a yd.

13. Find the cost of 37 1/2 bu. of potatoes, at 56 2/3 ct. a bu.

14. Find the cost of 26 4/5 yd. of tape, at 1 1/3 ct. a yd.

15. Find the cost of 6 6/7 oz. of pepper, at 4 1/4 ct. an oz.

16. Find the cost of 18 1/2 lb. of ham, at 10 1/4 ct. a lb.

17. Find the cost of 14 1/2 oz. of copper, at 2 1/4 ct. an oz.

18. Reduce 53000 ft. to mi.

19. Reduce 3 A. 120 sq. rd. to sq. yd.

20. Reduce 127512 in. to mi.

21. How many sq. in. in 3 A.?

22. A field 93 1/3 rd. long contains 7 acres; how wide is it?

23. How many steps 2 ft. 9 in. long must be taken in going 5 mi.?

24. A glacier moves 2 1/4 in. in a day; how long will it take it to move one mile?

LESSON 88

Name _____

PRACTICAL ARTICLE 124 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. Reduce 1/24 of a peck to the fraction of a pint.

2. Reduce 1/40 bu. to the fraction of a quart. f.

3. Reduce 1/28 lb. to the fraction of an ounce.

4. Reduce 1/16 lb. Troy to the fraction of an ounce.

5. Reduce 1/20 rd. to the fraction of a foot.

6. Reduce 7/1280 A. to the fraction of a square rod.

7. Reduce $3/350 to the fraction of a cent.

8. Reduce 1/1584 da. to the fraction of a minute.

9. Reduce 3/320 bu. to the fraction of a pint.

LESSON 89

Name _____

PRACTICAL ARTICLE 125 Date _____

OBJECTIVE(S)

- Find the value of fractions in integers

Directions: Children complete the following word problems.

1. Find the value of 2/3 of a day in integers.

2. Find the value of 4/5 mi. in integers.

3. Find the value of $3/5 in integers

4. Find the value of 2/5 mi. in integers.

5. Find the value of 4/5 lb. Troy in integers.

6. Find the value of 7/16 T. in integers.

7. Find the value of 5/8 A. in integers.

8. Find the value of 7/8 of 63 gallons of wine in integers.

LESSON 90

Name _____

TEST ARTICLE 124-125 Date _____

OBJECTIVE(S)

- Reduce given values to lower denominations

Directions: Children complete the following word problems.

1. Reduce 3/128 bu. to the fraction of a quart.

2. Reduce 7/90 gal. to the fraction of a pint.

3. Reduce 1/2000 cwt. to the fraction of an oz.

4. Reduce 1/5000 A. to the traction of a sq. yd.

5. Reduce 2/135 cu. yd. to the fraction of a cu. ft.

6. Reduce 3/1461 yr. to the fraction of a day.

7. Reduce 17/400 lb. to the fraction of an oz (Iron).

8. Reduce 3/1000 lb. to the fraction of a pwt.

9. Reduce 11/480 ʒ to the fraction of a scruple.

10. Reduce 1/104000 sq. mi. to the fraction of a sq. rd.

11. Reduce 3/1000000 cu. yd. to the fraction of a cu. in.

12. Reduce 1/90000 da. to the fraction of a sec.

13. Reduce 1/8000 bu. to the fraction of a pt.

14. Reduce 11/147000 wk. to the fraction of a min.

15. Reduce 12/875 gal. to the fraction of a gill.

16. Reduce 19/32 gal. to integers.

17. Reduce 7/11 T. to integers.

18. Reduce 17/18 mi. to integers.

19. Reduce 23/24 A. to integers.

20. Reduce 5/9 yr. to integers.

21. Reduce 7/9 lb. Troy to integers.

22. Reduce 59/60 gal. to integers.

23. Reduce 15/16 ʒ to integers.

24. Reduce 15/32 T. to integers.

25. Reduce 1/880 mi. to integers.

26. Reduce 3/100 of a degree to integers.

27. Reduce 1/121 sq. mi. to integers.

28. Reduce 4/5 chain to integers.

29. Reduce 25/81 C. to integers.

30. Reduce 1/5 O. to integers.

31. Reduce 37/81 da. to integers.

LESSON 91

Name _____

PRACTICAL ARTICLE 126 Date _____

OBJECTIVE(S)

- Reduce a fraction to a higher denomination via division

Directions: Children complete the following word problems.

1. Reduce 2/3 of a pint to the fraction of a peck.

2. Reduce 4/5 qt. to the fraction of a bushel.

3. Reduce 4/5 ft. to the fraction of a rod.

4. Reduce 3/80 oz. to the fraction of a pound.

5. Reduce 4/9 lb. to the fraction of a ton.

6. Reduce 3/5 pt. to the fraction of a bushel.

7. Reduce 4/7 oz. to the fraction of a hundred-weight.

8. Reduce 3/4 in. to the fraction of a rod.

9. Reduce 8/9 min. to the fraction of a day.

10. Reduce 5/112 oz. to the fraction of a hundred-weight.

LESSON 92

Name _____

TEST ARTICLE 126 Date _____

OBJECTIVE(S)

- Complete word problems involving reduction to higher denominations

Directions: Children complete the following word problems.

1. Reduce 4/5 min. to the fraction of a day.

2. Reduce 1/20 cu. ft. to the fraction of a cord.

3. Reduce 9/8 sq. in. to the fraction of a sq. yd.

4. Reduce 32/45 oz. to the fraction of a cwt.

5. Reduce 16/19 pt. to the fraction of a gal.

6. Reduce 32/5 pt. to the fraction of a bu.

7. Reduce 3/10 gr. to the fraction of an oz.

8. Reduce 243/16 cu. in. to the fraction of a cu. yd.

9. Reduce 36/11 ℈ to the fraction of a pound.

10. Reduce 22/3 yd. to the fraction of a mile.

11. Reduce 363/400 sq. yd. to the fraction of a sq. mi.

12. Reduce 487/5 hr. to the fraction of a year.

13. Reduce 25/36 lb. to the fraction of a ton.

14. Reduce 11/3 in. to the fraction of a chain.

15. Reduce 18/7 gi. to the fraction of a gal.

16. Reduce 1/16 qt. to the fraction of a bu.

LESSON 93

Name _____

PRACTICAL ARTICLE 127 Date _____

OBJECTIVE(S)

- Find what part of one compound number is of another

Directions: Children complete the following word problems.

1. 2 ft. 3 in. is what part of a yard?

2. 2 ft. 6 in. is what part of 6 ft. 8 in.?

3. 2 pk. 4 qt. is what part of a bushel?

4. What part is 2 yd. 9 in. of 8 yd. 2 ft. 3 in.?

5. What part of a day is 13 hr. 30 min.?

6. What part of a mile is 145 rd.?

7. What part of a yard is 2 ft. 8 in.?

8. 15 mi. 123 rd. is what part of 35 mi. 287 rd.?

9. A man has a farm of 168 A. 28 sq. rd.; if he sells 37 A. 94 sq. rd., what part of his farm will he dispose of?

10. What part of a pound is 7 1/9 oz.?

11. 2 qt. 1 1/3 pt. is what part of 1 bu. 1 qt. 1 2/3 pt.?

12. 1 yd. 1 ft. 1 9/11 in. is what part of 3 yd. 2 ft. 8 6/7 in.?

LESSON 94

Name _____

TEST ARTICLE 127 Date _____

OBJECTIVE(S)

- Find what part of one compound number is of another

Directions: Children complete the following word problems.

1. What part of 1 mi. 10 rd. is 88 rd.?

2. What part of 2 bu. 1 qt. is 1 bu. 2 qt.?

3. What part of 9 C. is 16 cu. yd.?

4. What part of 39 lb. is 7 lb. 8 oz.?

5. What part of 1 wk. 5 da. is 1 da. 8 hr.

6. 3 A. 6 sq. yd. is what part of 9 A?

7. 17 bu. 3 pk. 4 qt. is what part of 65 bu.?

8. 3 ʒ 1 ℈ is what part of 5 ʒ 2 ℈?

9. 8 yd. 1 ft. is what part of 5 rd. 1 yd.?

10. 2° 37' 30" is what part of 8° 45'?

11. What part is 5 gal. 1 gi. of 10 gal.?

12. What part is 3 doz. and 6, of a gross?

13. What part is 12 lb. 8 oz. of 2 T. 5 cwt.?

LESSON 95

Name _____

PRACTICAL ARTICLE 128 Date _____

OBJECTIVE(S)

- Add and subtract fractional compound numbers.

Directions: Children complete the following word problems.

1. Add 3/4 yd. and 5/6 ft.

2. From 2/9 da. subtract 5/6 hr.

3. Add 2/3 da. and 3/4 hr.

4. Add 1/4 wk. 1/4 da. and 1/4 hr.

5. Add 2/3 wk. 5/9 da. 2/3 hr. and 2/3 min.

6. Add 11/12 gal. and 1/12 qt.

7. From 7/9 da. subtract 1/18 hr.

8. From $5/8 subtract $3/40.

9. From 3/8 lb. subtract 7/8 oz.

10. From 1/7 da. subtract 6/7 hr.

LESSON 96

Name _____

TEST ARTICLE 128 Date _____

OBJECTIVE(S)

- Complete word problems involving addition and subtraction of fractions

Directions: Children complete the following word problems.

1. 5/24 sq. yd. – 3/8 sq. ft. = ?

2. 4/5 C. + 4/5 cu. yd. = ?

3. 3/4° – 4/5' = ?

4. 3/7 lb. – 4/7 oz. + 4/7 pwt. = ?

5. 3/8 T. – 4/5 cwt. = ?

6. 4/3 Cong. + 2/3 O. = ?

7. 3/5 mi. – 5/9 rd. = ?

8. 8/9 chain – 1/4 pace = ?

9. 3/4 wk. + 4/9 da. + 3/5 hr. = ?

10. 4/5 bu. + 3/5 pk. + 2/5 qt. + 2/5 pt. = ?

11. 4/9 gal. + 4/9 qt. + 4/9 qt. + 4/9 gi. = ?

12. 7/12 T. + 5/12 cwt. + 11/12 lb. = ?

13. 3/11 mi. + 4/11 rd. + 1/4 yd. + 1/4 ft. = ?

14. 2/9 ȝ + 4/9 ȝ + 1/3 ȝ = ?

15. 13/28 C. + 17/45 cu. yd. + 13/35 cu. ft. = ?

LESSON 97

Name _____

PRACTICAL ARTICLE 129 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems using the table below, where applicable.

1. Reduce 32989/56981 to its lowest terms.

2. Add 5/14, 8/21, 2 1/2, 3 2/3.

3. From 3 4/7 subtract 1 4/5.

4. From 3 5/8 subtract 1/3 of 3 1/2.

5. Add 5/9 of 7/10 and 2/5 of 7/12.

6. Add 1 3/4 ÷ 2 1/2 and 5 1/2 ÷ 3 1/8.

7. What number divided by 3/5 will give 10 for a quotient?

8. What number multiplied by 3/5 will give 10 for a product?

9. What number is that, from which if you take 3/7 of itself, the remainder will be 16?

10. What number is that, to which if you add 3/7 of itself, the sum will be 20?

11. A boat is worth $900; a merchant owns 5/8 of it, and sells 1/3 of his share: what part has he left, and what is it worth?

12. I own 7/12 of a ship, and sell 1/3 of my share for $1944 4/9: what is the whole ship worth?

13. What part of 3 cents is 2/3 of 2 cents?

14. What part of 368 is 176?

15. From 25/37 subtract the sum of 1/8, 1/18, and 13/111.

16. From 1 subtract 3/10 of 7/12 of 4 9/14.

17. From 2/3 ÷ 5/7 subtract 5/8 ÷ 10/11.

18. If I ride 2044 rods in 7/15 of an hour, at that rate how far will I ride in 1 14/15 hr.?

19. What part of 1 1/4 feet are 3 1/8 inches?

20. Two men bought a barrel of flour; one paid $3 1/5, and the other $3 2/3 : what part of it should each have?

21. A has $2400; 5/8 of his money, + $500, is 5/4 of B's: what sum has B?

22. John Jones divided his estate among 2 sons and 3 daughters, the latter sharing equally with each other. The younger son received $2200, which was 5/12 of the share of the elder, whose share was 16/35 of the whole estate: find the share of each daughter.

LESSON 98

Name _____

TEST ARTICLE 129 Date _____

OBJECTIVE(S)

- Complete word problems involving fractions

Directions: Children complete the following word problems.

1. From 8 1/3 take 7 7/10.

2. Reduce 5/22 sq. mi. to integers.

3. Add 3 1/3 to the difference between 4 1/4 and 6 1/6.

4. From 7 7/9 * 6 6/7 take 6 6/7 * 5 5/6.

5. Reduce 4/9 to a fraction whose denominator is 126.

6. Reduce 9117/13169 lowest terms.

7. Reduce 810/900 to twentieths.

8. Find a number which multiplied by 8 1/3 gives 60.

9. What number divided by 4 5/7 gives 4 5/11?

10. From 7/8 ÷ 5/4 take 3/8 ÷ 7/4.

11. Reduce 7/11 to a fraction whose numerator is 77.

12. What part of $5 is 4/5 of 5 cents?

13. Reduce 1/7750 T. to the fraction of a pound.

14. $4 1/2 will buy 1 2/5 yd. of cloth; how much will 1 2/3 yd. cost?

15. Bought 3750 lb. of iron, at $3.50 per cwt.; what is the amount of the bill?

16. A boy works 3 days at the rate of $5 3/4 a week; how much does he earn?

17. I have 55 A. of land, worth $17 1/2 an acre; B wishes to trade me 7 hogs, worth $7 1/3 each; what part of my land should be given for them?

18. Bought 32 1/2 T. of iron for $1218.75; at that rate, what quantity can I buy for $1000?

19. A man lost $13 3/4, and borrowed $57 3/5; he then had $106 1/2; what sum had he at first?

20. What number is as much greater than 15 1/2 as 15 1/2 is greater than 7 5/11?

21. A farmer raised 208 bu. 1 pk. of wheat, and sold 119 bu.; what part of his crop has he remaining?

22. A lady bought 35 1/4 yd. carpet for $47; had she bought 6 yd. more, what would the bill have been?

23. A farm is worth $5500, and A owns 5/12 of it; what part of his share should A sell for $825?

24. How much would a family consume in August, at the rate of 8 lb. 5 oz. daily?

25. 5/7 of a certain number is 389 1/7; what is the number?

26. Multiply 4 2/5 * 8 1/3 * 2 2/11 * 3 3/8.

27. A farmer sold 4/11 of his flock of geese, and has 14 dozen remaining; how many geese had he at first?

28. Reduce $\frac{7\ \ 1/3}{8\ \ 4/5}$, $\frac{11\ \ 1/8}{12\ \ 3/4}$, $\frac{7\ \ 1/2}{12\ \ 6/7}$, and $\frac{7\ \ 1/4}{11\ \ 3/5}$ to a common denominator.

29. Hats cost $3 1/3 apiece, but late in the season are sold at 4/5 of the cost; how many can I then buy for $48?

30. Sold a house for $2373, which was 7/9 of the cost; how much did I lose?

31. A lawyer collected $18.80, and kept 3/8 of it; how much did he pay over?

32. What number is that, to which, if you add 3/8 of itself, the sum will be 82 1/2?

33. Find the value of a lot 88 ft. long and 49 1/2 ft. wide, at $700 per acre.

34. 5/6 of a farm are worth $3157 1/2; what are 8/9 of it worth?

35. 53 1/3 yards of cloth cost me $88; what will I lose by selling 8 1/2 yd. for $10?

36. Three men found a sum of money, of which the first took 1/5, and the second 5/8, leaving the third man $69.44; what was the sum found?

37. A expended $347 for land, at $2/5 an acre; and B, $4243 for land, at $5 1/2 an acre; how many acres have both together?

38. What was the cost of 47 head of cattle, if $47 was lost by selling 13 head for $26 1/2 apiece?

39. From a lot 100 rd. long and 72 1/2 rd. wide, was sold a lot 45 rd. long and 29 rd. wide; what part of the whole lot was sold?

40. A owns 405 A. 39 sq. rd., and B owns 391 A. 109 sq. rd.; how much land must A sell B, so that their farms may be of equal size?

LESSON 99

Name _____

PRACTICAL ARTICLE 130 Date _____

OBJECTIVE(S)

- Complete practice word problems involving fractions

Directions: Children complete the following word problems.

1. What will 24 yd. of muslin cost at 25 ct. a yd.?

2. I spent $1.12 1/2 for muslin at 12 1/2 ct. a yd.: how many yd. did I buy?

3. What cost 12 1/2 yd. of ribbon at 18 3/4 ct. a yd?

4. Paid $2.25 for muslin at 18 3/4 ct. a yd. how many yd. did I buy?

5. What will 5 1/2 yd. of linen cost at $0.62 1/2 a yd.?

6. Paid $66.25 for books at $3.75 a dozen: how many doz. books did I buy?

7. What will 80 gal. of wine cost at $2.37 1/2 a gal.?

8. A number of men divide $39 so that each one receives $4.87 1/2: how many men are there?

9. What will 36 barrels of flour cost at $8.33 1/3 a barrel?

10. How many yd. of cloth at $1.33 1/3 a yd. can be bought for $246.66 2/3?

11. What will 4 A. 60 sq. rd. of land cost at $16.50 an acre?

12. At $18.33 1/3 per acre, how much land can be bought for $229.16 2/3?

13. What will 11 A. 120 sq. rd. of land cost, at $125.60 per acre?

14. At $250 a lot, containing 50 X 150 ft., how much land can be bought for $10000?

15. What will 83 bu. 3 pk. 2 qt. of grass seed cost, at $6.20 a bu.?

16. At $0.75 a bushel, how many bushels can be bought, for $167.50?

17. What will 3 1/2 yd. cost, at $1.75 a yard?

18. At $1.50 a yard, how much cloth can be bought for $7.12 1/2?

19. What will 45 lb. 12 oz. of butter cost, at $0.37 1/2 per pound?

20. At $0.12 1/2 per pound, how much sugar can be bought for $2.93 3/4?

21. What is the cost of 2 T. 9 cwt. of wool at 37 1/2 ct. a pound?

22. What is the cost of 100 readers at $3.90 a dozen?

23. What is the cost of 3 3/4 dozen knives at $5.40 a dozen?

24. A farmer sold 6 1/2 doz. chickens, at $0.33 1/3 apiece, and 37 1/2 lb. butter, at $0.37 1/2 per pound: he received $36 in money, and the remainder in sugar, at $0.12 1/2 per pound: how many pounds of sugar did he get?

LESSON 100

Name _____

TEST ARTICLE 130 Date _____

OBJECTIVE(S)

- Complete practice problems involving fractions

Directions: Children complete the following practice problems. Find the cost of:

1. 450 lb. butter, at 25 ct. a pound.

2. 784 yd. muslin, at 6 1/4 ct. a yard.

3. 462 gal. vinegar, at 16 2/3 ct. a gallon.

4. 673 yd. delaine, at 62 1/2 ct. a yard.

5. 96 gal. wine, at $1.87 1/2 ct. a gallon.

6. 5726 lb. whiting, at 1 1/2 ct. a pound.

7. 538 bu. wheat, at $1.12 1/2 a bushel.

8. 788 yd. cloth, at $1.62 1/2 a yard.

9. 375 lb. cheese, at 8 1/3 ct. a pound.

10. 424 A. land, at $3.18 3/4 an acre.

11. 398 bu. barley, at 75 ct. a bushel.

12. 666 lb. feathers, at 33 1/3 ct. a pound.

13. 78 C. wood, at $4.75 a cord.

14. 3786 lb. twine, at 16 2/3 ct. a pound.

15. 5 gal. 3 qt. of brandy, at $2.50 a gallon.

16. 17 yd. 2 ft. of paving, at $2.40 a yard.

17. 69 bu. 3 pk. of potatoes, at 68 ct. a bushel.

18. 4 lb. 11 oz. of honey, at 36 ct. a pound.

19. 3 hr. 45 min. work, at 40 ct. an hour.

20. 7 oz. 7 pwt. of silver, at 88 ct. an ounce.

21. 3 bu. 3 pk. of clover seed, at $3.60 a bushel.

22. 49 sq. yd. 6 sq. ft. of plastering, at 27 ct. a square yard.

23. 3 ʒ 2 ʒ 1 ℈ of quinine, at $3.60 an ounce.

24. 4 bu. 2 pk. 5 qt. of berries, at $3.20 a bushel.

25. 15 gal. 3 qt. 1 pt. 1 gi. of wine, at $1.92 a gallon.

26. 5 C. 96 cu. ft. of wood, at $4.40 a cord.

27. How many bushels of oats, at 37 1/2 ct. a bu., can be bought for $7.87 1/2?

28. How much cloth, at $2.12 1/2 a yard, can be bought for $90.31 1/4?

29. What cost 18 lb. 12 oz. of coffee, at 33 1/3 ct. a lb.?

30. Find the cost of 500 screws, at 36 ct. a gross.

31. Find the cost of 18 bu. 2 pk. of apples, at $.66 2/3 a bushel.

32. What cost 40 rubbers, at 40 cents a dozen?

33. At $3.37 1/2 an acre, how many acres of ground can be bought for $281.25?

34. What cost 5 bu. 2 pk. of strawberries, at 33 1/3 ct. a quart?

35. A week's work is 6 da., of 10 hr. each; how much can a man earn in 4 da. 6 hr., if his weekly wages are $10.50?

36. Find the cost of 11 T. 940 lb. of hay, at $12 a ton.

LESSON 101

Name _____

INTELLECTUAL LESSON 45 Date _____

OBJECTIVE(S)

- Complete the following general review problems

Directions: Children complete the following general review problems.

1. William had 23 cents: Thomas gave him 8 cents more, George 6, James 5, and David 7; he gave 15 cents for a book: how many cents had he left?

2. A grocer paid $12 for sugar, $9 for coffee, $5 for tea, $7 for flour, and had $10 left: how many dollars had he at first?

3. A boy has 11 cents: his father gives him 9 cents, his mother 6, and his sister enough more to make 34: how many cents does his sister give him?

4. Five men bought a horse for $42: the first gave 813; the second, $7; the third, $5; and the fourth, $9: how many dollars did the fifth give?

5. A man purchased 8 sheep, at $4 a head; 5 barrels of flour, at $3 a barrel; 4 yards of cloth, at $3 a yard; and 5 ounces of opium, at $1 an ounce: how much did he spend?

6. A boy lost 25 cents: after finding 15 cents, he had 25: how many cents had he at first?

7. A man owed a debt of $28, and paid all but $9: how much did he pay?

8. Borrowed $56: at one time I paid $23; at another, all but $7: how much did I pay the last time?

9. James borrowed 37 cents: at one lime he paid 5 cents, at another 8, and the third time, all but 15: how many cents did he pay the third time?

10. A farmer sold 1 cow, at $18, and 5 pigs, at $3 each, receiving in payment 3 sheep, at $3 each, and the rest in money: how much money did he receive?

11. A farmer sold 12 barrels of cider, at $3 a barrel: he then purchased 5 barrels of salt, at $3 a barrel, and some sugar, for $8: how many dollars had he left?

12. A merchant purchased 13 hats, at $4 each; 5 pairs of shoes, at $2 a pair; and an umbrella, for $7: what must he sell the whole for to gain $9?

13. If 2 barrels of flour cost $12, what will 7 barrels cost? 5 barrels?

14. If 3 barrels of cider cost $12, what will 4 barrels cost? 9 barrels?

15. If 4 yards of cloth cost $28, what will 7 yards cost?

16. If 5 tons of hay cost $35, what will 8 tons cost?

17. If 7 apples cost 28 cents, what will 3 apples cost?

18. If 8 oranges are worth 24 apples, how many apples are 3 oranges worth?

19. If 2 pounds of cheese cost 36 cents, what will 3 pounds cost?

20. If 8 yards of cloth cost $56, what will 7 yards cost?

21. If 9 yards of calico cost 72 cents, what will 6 yards cost? 8 yards? 10 yards?

22. A walks 5 miles, while B walks 3: when A has gone 35 miles, how far has B gone?

23. Joseph and his father are husking corn: the father can husk 7 rows while Joseph husks 3: how many rows will Joseph husk while his father husks 42?

24. Charles can earn $9 while Mary earns $4: how many dollars will Charles earn while Mary earns $28.

25. If 6 horses eat 12 bushels of oats in a week, how many bushels will 10 horses eat in the same time?

26. If five horses eat 16 bushels in 2 weeks, how long would it take them to eat 56 bushels?

27. If 6 apples are worth 18 cents, how many apples must be given for 5 oranges, worth 6 cents each?

28. How many horses can eat in 9 days the same amount of hay that 12 horses eat in 6 days?

LESSON 102

Name _____

INTELLECTUAL LESSON 46 Date _____

OBJECTIVE(S)

- Complete the following general review problems

Directions: Children complete the following general review problems.

1. If 4 yards of cloth cost $16:
   a. What will 5 yards cost?

   b. 9 yards?

2. What are:
   a. 8/9 of 72?

   b. 9/8 of 72?

3. If you had 64 cents, how many oranges could you buy, at 8 cents each?

4. Ninety-six is how many times 6?

5. James had 48 chestnuts: he gave 1/2 of them to his brother, and 1/3 to his sister: how many had he left?

6. Nine times 9 are how many times 12?

7. How many ninths:
   a. In 8 5/9?

   b. In 9 1/9?

8. Reduce 48/120, 54/189, 240/288 to their lowest terms.

9. Reduce 3/9, 4/16, 17/72, to a least common denominator.

10. A farmer planted 4 1/2 acres in potatoes, 20 3/4 acres in wheat, and 24 7/8 acres in oats: how many acres did he plant?

11. From 9 3/8 take 5 2/3.

12. A man having 84 miles to travel, went 1/4 of the distance the first day, 1/3 the second, and the rest the third day: what part did he travel the last day, and how far?

13. What are 9 times 7/18?

14. What are 7/11 of 12?

15. If 4 yards of cloth cost $15, what will 7 yards cost?

16. How many are 7 times 7 5/7?

17. Four times 6 3/7 are how many times 7?

18. Bought 8 3/4 pounds of sugar, at 8 cents a pound, and paid for it with milk, at 5 cents a quart: how many quarts did it take?

19. What are 5/6 of 3/4 of 2/3 of 6?

20. If 6 kegs of tar cost $1 3/10, what will 9 kegs cost?

21. A farmer sold a horse for $99, and gained 3/8 of its cost: what did it cost?

22. If 3/5 of the cost of a horse was $96, and it was paid with flour, at $6 a barrel, how many barrels did it take?

23. 84 is 7/6 of how many times 9?

24. 9/25 of 125 are how many times 5?

25. 8/9 of 81 are 9/8 of what number?

26. 4/7 of 35 are 5/6 of how many times 3/8 of 16?

27. If a man pays $17 1/2 for 4 3/8 yards of cloth, what is the cost of 1 yard?

28. If an apple is worth 3/4 of a cent, how many apples can be purchased for 18 cents?

29. 7 2/3 are 5/7 of what number?

30. Bought 3 1/2 dozen hinges, at $1 4/5 a dozen: how much did they cost?

31. Bought 30 yards of percale, at 12 1/2 cents a yard: how many dollars did it cost?

32. Paid $7 3/4 for alpaca, at 33 1/3 cents a yard: how many yards did I buy?

33. How much a day must a man earn to receive $72 for 8 weeks, 6 days to the week?

34. If $2 2/3 are divided equally among 4 boys, what is each boy's share?

35. At 5 lemons for 3 cents, how many lemons can be bought for 12 cents?

36. If 1 1/3 yards of cloth cost $8, how much can be purchased for $12?

37. The age of Joseph is 20 years, which is 2/5 of the age of his father: the father's age is 10 times that of his youngest son: what is the age of the father? What is the age of the youngest son?

38. By selling a quantity of cloth for $21, I made 2/5 of the cost: I paid for it with corn, at $1/3 per bushel: how many bushels did I give?

39. If 3/5 of a yard of cloth cost $2/3, what will 3 yards cost?

40. What will be the cost of 11 yards of cloth, if 5 1/2 yards cost $4 2/5?

41. 1/3 of a certain number is 2 more than 1/2 of 12: what is the number?

42. 1/4 of a certain number is 3 less than 1/5 of 30: what is the number?

43. 2/5 of 20 are 6 less than how many thirds of 21?

44. 3/4 of 24 are 6 more than 2/3 of what number?

45. 5/6 of 30, increased by 4, are 1 less than 3/4 of some number: what is the number?

46. 3/5 of 40 are 3 less than 9/10 of how many times 6?

47. A boy having 40 cents gave 3/5 of them for 2 melons what was the price of 1 melon?

48. James had 14 cents, and gave 4/7 of them to his sister: how many cents had he left?

49. John had 15 pears: he gave 1/3 to Frank, and 3/5 to Harry: how many had he left?

50. A man had 30 yards of cloth, and sold 2/5 of it for $48: how much was that a yard?

51. John had 25 cents, and gave 4/5 of them for peaches, at 2 cents each: how many did he buy?

52. A boy having 54 chestnuts, divided 5/9 of them among 3 girls: how many did each receive?

53. A man had 28 barrels of flour, and sold 2/7 of them for $48: what was that a barrel?

54. James had 48 cents: he gave 3/8 to his brother, and spent the rest in chestnuts, at 9 cents a quart: how many quarts of chestnuts did he buy?

55. Thomas had 28 cents: he gave 1/4 to his sister, and 3/7 to his brother, and with the remainder he bought 3 newspapers: what did each cost?

56. If 5 men earn $30 in 3 days, how much will 2 men earn in the same time? How much will 2 men earn in 1 day?

57. 6 is what part of 3/5 of 40?

58. 3/7 of 14 is what part of 54?

59. 5/6 of 12 is what part of 4/9 of 72?

60. 3/5 of 20 is what part of twice that number of which 14 is 7/9?

61. If 3/8 of a ton of hay cost $9, what will 5/6 of a ton cost?

62. If $7 will buy 56 yards of muslin, how many yards will $4 buy?

63. If 3 men can do a job of work in 16 days, in how many days can 4 men do it?

64. If 3 men spend $12 in 1 week, at the same rate, how many dollars would 2 men spend in 6 weeks?

65. If 6 men do a piece of work in 7 days, in how many days can 3 men do it?

66. If 5 men do a piece of work in 8 days, in how many days can 4 men do a piece twice as large?

67. If 6 men perform a certain amount of labor in 5 days, in how many days can 2 men do 1/2 that amount?

68. James had 16 apples: he kept 1/4 of them himself and divided the remainder equally among 3 of his companions: how many did each receive?

69. Three-fourths of 24, increased by 2/3 of 12, are equal to how many?

70. Five-sixths of 24, diminished by 3/4 of 20, equal how many?

71. Two-thirds of 12, less 1/2 of 12, are 2/5 of what number?

72. Add together 1/2, 2/3, and 3/4 of 12.

73. From 10 take 3/4 of itself; add to the remainder its 1/2: what is the result?

74. Thomas had 28 cents: he gave 2/7 of the amount to his sister, and 2/5 of the remainder to his brother: how much more did he give away than he had left?

75. James had 35 marbles: he gave to Thomas 3/7 of them, to Charles 2/5: to which did he give the most, and how many? What number had he left?

76. Thomas had $28: he kept 2/7 of the whole, and divided the remainder equally among his 4 brothers: how many dollars did each receive?

77. A grocer had 14 barrels of flour: he sold 4/7 of it at $3 a barrel, and the remainder at $5 a barrel: what amount did he receive?

78. Bought 15 yards of cloth, at $2 a yard: I sold 1/3 of it at $4 a yard, 2/5 at $3 a yard, and the remainder at $5 a yard: how much did I gain?

79. Bought 10 yards of cloth for $90, and sold 2/5 of it for $40: how much a yard did I gain on the quantity sold?

80. Two men travel the same direction: A is 40 miles ahead of B; but B travels 23 miles a day, and A 18: in how many days will B overtake A?

81. A hare is 90 yards in advance of a hound: the hound goes 10 feet in a second, and the hare 7 feet in a second: in how many seconds will the hound overtake the hare? How far will each run?

82. If a hound runs 7 rods while a hare runs 4, how far will the hare run while the hound runs 35 rods?

83. C and D travel in the same direction: C is 15 miles ahead of D; but D travels 5 miles an hour, and C only 2: in how many hours will D overtake C? How far will D have traveled?

84. A cistern containing 24 gallons, is filled by a pipe at the rate of 8 gallons an hour, and emptied by a pipe at the rate of 5 gallons an hour: if both pipes are open, how long will the cistern be in filling?

85. A cistern containing 36 gallons has 2 pipes; by the first it receives 6 gallons an hour, and by the second it discharges 9 gallons an hour: if both pipes are left open, how long will it take to empty the cistern?

86. A pair of pants cost $8, which was 2/5 of the cost of a coat; a vest cost 1/2 as much as the pants: what was the cost of the whole suit?

87. Joseph had $1: he spent 2/5 of the amount for oranges; 2/3 of the remainder for lemons; and 1/2 of the last remainder for an illustrated paper: how much had he left?

88. When hay was $20 a ton, I gave 3/4 of a ton for 4 tons of coal: what was the coal worth per ton?

89. A man can perform a journey in 3 3/8 days: what part of the journey can he perform in 2 1/4 days?

90. A can do a piece of work in 2 days; B, in 4 days; and C, in 6 days: in what time will they all do it when working together?

91. Bought 20 yards of cloth, at $4 a yard, and 15 yards, at $3 a yard: sold 6/7 of the whole, at $3 a yard, and the remainder, at $4 a yard: what was the entire loss? What the average loss per yard?

92. William had $96. He spent 1/12 for books, 5/11 of the remainder for clothing, 5/6 of what then remained for furniture, and, with what was left, bought wheat, at $1 a bushel: how many bushels did he buy?

93. A and B are traveling in the same direction, A being 36 miles ahead of B; A travels 3/4 of the distance per hour that B travels, and B travels 6 miles an hour: in how many hours will B overtake A?

LESSON 103

Name _____

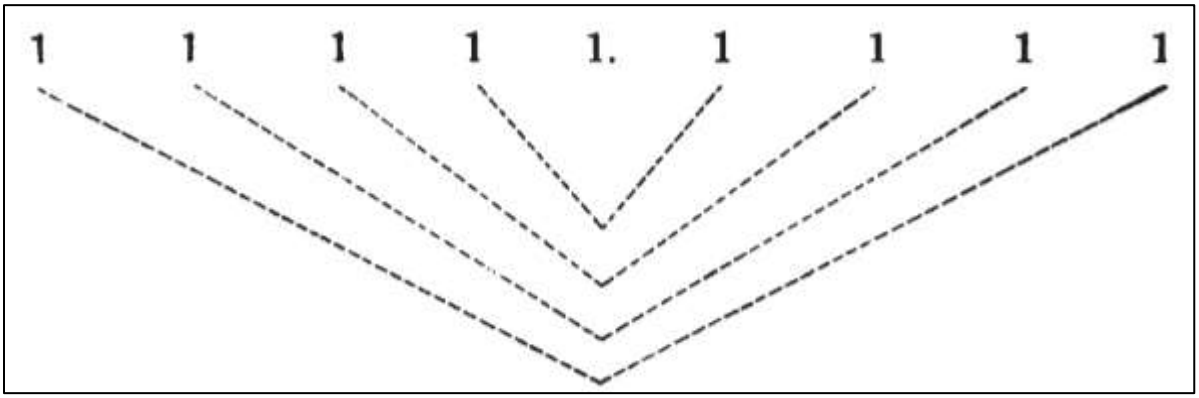
PRACTICAL ARTICLE 131-132 Date _____

OBJECTIVE(S)

- Complete the diagram taken from the lesson

Directions: Children complete the diagram.

1. Complete the diagram with the following terms: unit, ten-thousandth, thousandth, hundredth, tenth, ten, hundred, thousand, and ten-thousand.



2. Label each digit with its place in the bolded number below using following terms: ten-thousandth, thousandth, hundredth, tenth, unit, ten, hundred, thousand, and ten-thousand.

42301.5876

a. 4 _____

b. 2 _____

c. 3 _____

d. 0 _____

e. 1 _____

f. 5 _____

g. 8 _____

h. 7 _____

i. 6 _____

LESSON 104

Name _____

PRACTICAL ARTICLE 133-134 Date _____

OBJECTIVE(S)

- Convert fractions to their decimal equivalents.

Directions: Children complete the following problems.

1. 1/10 _____
2. 5/10 _____
3. 9/10 _____
4. 2/100 _____
5. 4/100 _____
6. 8/100 _____
7. 3/1000 _____
8. 6/1000 _____
9. 1/10000 _____
10. 5/10000 _____
11. 4/100000 _____
12. 6/100000 _____
13. 7/1000000 _____
14. 9/1000000 _____

LESSON 105

Name _____

PRACTICAL ARTICLE 135 Date _____

OBJECTIVE(S)

- Solve the following problems involving decimal fractions.

Directions: Children complete the following problems involving decimal fractions.

1. Write two hundred and sixty-five thousandths. _____
2. Write two hundred and sixty-five millionths. _____
3. Write two hundred and sixty-five hundredths. _____
4. Write four hundred and ninety-eight and two hundred and sixty-five millionths. _____
5. Twenty-six hundredths. _____
6. Thirty-five hundredths. _____
7. Eighty-seven hundredths. _____
8. Four hundred and nineteen hundredths. _____
9. Five thousandths. _____
10. Fifty-four thousandths. _____
11. Three hundred and four thousandths. _____
12. Seven thousand two hundred and ninety-three thousandths. _____
13. Twenty-five and forty-seven thousandths. _____
14. Two hundred and five ten-thousandths. _____

15. Four thousand one hundred and twenty-five ten-thousandths. _____

16. Nine hundred-thousandths. _____

17. Nine hundred thousandths. _____

18. Six hundred and five hundred-thousandths. _____

19. Twenty thousand three hundred and four hundred-thousandths. _____

20. Seven millionths. _____

21. Two hundred and three millionths. _____

22. Three hundred thousand and four millionths. _____

23. Twenty-four ten-millionths. _____

24. Eighty thousand and six ten-millionths. _____

25. Two hundred millionths. _____

26. Two hundred-millionths. _____

27. Nine hundred and seven hundred-millionths. _____

28. Twenty million twenty thousand and three hundred-millionths. _____

29. One million ten thousand and one hundred millionths. _____

30. One million ten thousand and one hundred-millionths. _____

31. One hundred and six and thirty-seven thousandths.
    _____

32. One thousand and one thousandth. _____

33. Two hundred and twenty-five thousandths. _____

34. Two hundred units and twenty-five thousandths. _____

35. Two thousand nine hundred and twenty-nine millionths.
    _____

36. Two thousand nine hundred units and twenty-nine millionths.
    _____

37. One million and five billionths. _____

38. Two hundred and two ten-billionths. _____

39. Two hundred units and two ten-billionths. _____

40. Sixty-five and six thousand and five millionths. _____

41. Change the following fractions to decimals:

    a. 3/10 _____

    b. 7/10 _____

    c. 9/100 _____

    d. 17/100 _____

    e. 23/100 _____

    f. 41/100 _____

    g. 53/100 _____

42. Change the following fractions to decimals:

    a. 87/100 _____

    b. 97/100 _____

    c. 123/1000 _____

    d. 289/1000 _____

    e. 487/1000 _____

    f. 733/1000 _____

43. Change the following fractions to decimals:

    a. 3/1000 _____

    b. 101/10000 _____

    c. 53/100000 _____

    d. 503/1000000 _____

LESSON 106

Name _____

TEST ARTICLE 135 Date _____

OBJECTIVE(S)

- Write decimal numbers.

Directions: Children complete the following problems involving decimal fractions.

1. 803 thousandths. _____
2. Fifty-one thousandths. _____
3. Nine thousandths. _____
4. Forty-six ten-thousandths. _____
5. Two hundred and one ten-thousandths. _____
6. 7735 hundred-thousandths. _____
7. 86 hundred-thousandths. _____
8. 3 hundred-thousandths. _____
9. Nine hundred and nineteen thousandths. _____
10. Nine thousand and twenty ten-thousandths. _____
11. Ten thousand and one hundred-thousandths. _____
12. Five thousand and sixty-seven ten-thousandths. _____
13. 381257 millionths. _____
14. 40703 millionths. _____
15. 2008 millionths. _____

16. 88 millionths. _____

17. 7 millionths. _____

18. Forty-seven thousand and eighteen millionths. _____

19. Five hundred and fifty-five millionths. _____

20. Three hundred thousand and eight millionths. _____

21. Sixty-seven millionths. _____

22. Fifty-seven tenths. _____

23. 2406391 ten-millionths. _____

24. 65400 ten-millionths. _____

25. 49 ten-millionths. _____

26. 880004 ten-millionths. _____

27. 6 ten-millionths. _____

28. 31000722 ten-millionths. _____

29. Four hundred and eighty hundredths. _____

30. 14 units and 5 hundredths. _____

31. 3 units and 17 thousandths. _____

32. 3000 units and 4 thousandths. _____

33. 3004 thousandths. _____

34. 8354 hundredths. _____

35. One unit and one millionth. _____

36. One million units and one millionth. _____

37. Three hundred millionths. _____

38. Seven hundred units and seven hundredths. _____

39. 19 billionths. _____

40. 39704 ten-billionths. _____

41. 800004 hundred-millionths. _____

42. Eight thousand and five tenths. _____

43. Eight thousand units and five ten-thousandths. _____

44. 379000 units and 379 thousandths. _____

45. Fifty thousand and one hundred billionths. _____

46. Change the following fractions to decimals:

    a. 3/10 _____

    b. 7/100 _____

    c. 19/1000 _____

    d. 483/100 _____

    e. 39/10000 _____

47. Change the following fractions to decimals:

    a. 88/100 _____

    b. 903/10000 _____

    c. 7/1000 _____

    d. 21/100000 _____

    e. 89/10 _____

48. Change the following fractions to decimals:

    a. 5 87/100 _____

    b. 16 8/1000 _____

    c. 200 17/100 _____

    d. 30 30/100000 _____

LESSON 107

Name _____

PRACTICAL ARTICLE 136 Date _____

OBJECTIVE(S)

- Read decimal numbers
- Change decimal numbers to common fractions

Directions: Children read the following decimal numbers.

1. .265
2. .000265
3. 2.65
4. .028; .341; 2.327; 50.005; 184.173.
5. .0003; .0625; .2374; .2006; .0104.
6. 3.0205; 810.2406; 10720.0905.
7. .00004; .00137; .02376; .01007.
8. .001768; .040035; 70.360004.
9. .1010101; .00040005; .00100304.
10. .31456; .000133; 60.04; 45.1003.
11. 357.75; .4928; 5.945; 681.0002.
12. 70.1200764; 954.203; 38.027.
13. 1007.3154; 7496.35491768.
14. .00715; 3.00005; 28.10065701.

15. 13.0008241094710947.

16. Change the following decimals to common fractions:

    a. .9 _____

    b. .13 _____

    c. .19 _____

    d. .29 _____

    e. .37 _____

    f. .73 _____

17. Change the following to common fractions:

    a. .91 _____

    b. .347 _____

    c. .513 _____

    d. .691 _____

    e. .851 _____

    f. .917 _____

18. Change the following to common fractions:

    a. . 007 _____

    b. .0207 _____

    c. .00079 _____

    d. .001007 _____

19. Change the following to common fractions:

    a. 1.36 _____

    b. .3421 _____

    c. .03401 _____

    d. .0900 _____

20. Change the following to common fractions:

    a. .001 _____

    b. .5302 _____

    c. 8.01 _____

    d. .000053 _____

LESSON 108

Name _____

TEST ARTICLE 136 Date _____

OBJECTIVE(S)

- Solve the following problems involving decimal fractions.

Directions: Children complete the following problems involving decimal fractions.

1. 4.18; 6.008; .0006; 36.036; 3.4075.
2. .702; .078; .02005; 50.09; .0006.
3. .00066; .30066; .00456; .000036.
4. .01; .016; .0162; .01624.
5. 4736.2; 3.8914; .356; 283.67.
6. 2000.20002; 304.0506; 7.24006.
7. .3703; 3.703; 37.03; 370.3.
8. 4.4; 4.04; 4.004; 4.0004.
9. .056; 30.07; .00009; .010203.
10. 45.0009; .005009; 60.016.
11. 37.03; 4638.9; 364.005.
12. .0102; .001002; .00010002.
13. 5.806; 50.4903; 6.8938.
14. 3700.0004; .3704; 3000.0704.
15. Change the following to common fractions:

a. .64 _____

b. .165 _____

c. .0375 _____

d. .9375 _____

16. Change the following to common fractions:

a. .024 _____

b. .00008 _____

c. .0000088. _____

17. Change the following to common fractions:

a. .875 _____

b. .4375 _____

c. .15625 _____

18. Change the following to common fractions:

a. .1024 _____

b. .83875 _____

c. .873642 _____

LESSON 109

Name _____

PRACTICAL ARTICLE 137-139 Date _____

OBJECTIVE(S)

- Answer the following questions involving decimal operations.

Directions: Children complete the following questions regarding decimal operations.

1. The five decimal operations are:

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

2. Circle the numbers that are identical to the first for each problem:

a.	**7**	7.01	7.0	7.0003	7.0000000	0.7
b.	**9**	.009	.9	9.0	9.00	9.0001
c.	**100**	.100	.0100	100.0	100.00	100.0000
d.	**73**	73.0	73.1	73.00001	73.00000	73.00
e.	**4321**	.4321	43.21	4321.0	4321.00	4.321

LESSON 110

Name _____

PRACTICAL ARTICLE 140-141 Date _____

OBJECTIVE(S)

- Write decimals as common fractions in their lowest terms

Directions: Children complete the following problems involving converting decimals to common fractions in their lowest terms.

1. Reduce .75 to a common fraction. _____
2. Reduce .6 to a common fraction. _____
3. Reduce .25 to a common fraction. _____
4. Reduce .375 to a common fraction. _____
5. Reduce .035 to a common fraction. _____
6. Reduce .5625 to a common fraction. _____
7. Reduce .34375 to a common fraction. _____
8. Reduce .1484375 to a common fraction. _____
9. Express 4.02 as an integer and common fraction. _____
10. Express 8.415 as an integer and common fraction. _____

LESSON 111

Name _____

TEST ARTICLE 141

Date _____

OBJECTIVE(S)

- Write decimals as common fractions in their lowest terms

Directions: Children convert the following decimal numbers to common fractions in their lowest terms.

1. .875 _____
2. .64 _____
3. .512 _____
4. .625 _____
5. .025 _____
6. .256 _____
7. .0025 _____
8. .2224 _____
9. .975 _____
10. .0084 _____
11. .1875 _____

12. .46875 _____

13. 4.045 _____

14. 26.18 _____

15. .0125 _____

16. 19.625 _____

17. 300.25 _____

18. 46.875 _____

19. 13.92 _____

20. 20.02 _____

21. .6875 _____

22. 14.01875 _____

23. 9.008 _____

24. .34375 _____

LESSON 112

Name _____

PRACTICAL ARTICLE 142 Date _____

OBJECTIVE(S)

- Solve the following problems involving reducing fractions to decimals.

Directions: Children reduce the following fractions to decimals.

1. 3/4 _____
2. 4/5 _____
3. 5/8 _____
4. 7/25 _____
5. 3/40 _____
6. 15/16 _____
7. 1/1250 _____
8. 9/400 _____
9. 1/256 _____
10. 5/6 _____
11. 1/11 _____
12. 4/33 _____

LESSON 113

Name _____

TEST ARTICLE 142

Date _____

OBJECTIVE(S)

- Solve the following problems involving reducing fractions to decimals.

Directions: Children reduce the following fractions to decimals.

1. 3/8 _____
2. 9/20 _____
3. 5/16 _____
4. 11/25 _____
5. 13/50 _____
6. 15/80 _____
7. 13/32 _____
8. 17/32 _____
9. 21/16 _____
10. 3/160 _____
11. 1/800 _____

12. 17/250 _____

13. 9/500 _____

14. 137/160 _____

15. 11/640 _____

16. 61/64 _____

17. 89/50 _____

18. 50/89 _____

19. 17/71 _____

20. 28/70 _____

21. 36/48 _____

22. 49/52 _____

23. 27/200 _____

24. 13/811 _____

LESSON 114

Name _____

PRACTICAL ARTICLE 143 Date _____

OBJECTIVE(S)

- Add decimal numbers

Directions: Add the specified decimal numbers.

1. Add 375.83; 49.627; 5842.1963; 813.9762.

2. Add 37.1065; 432.07; 4.20733; 11.706.

3. Add 4 and 4 ten-thousandths; 28 and 35 thousandths; 8 and 7 hundredths; and 9404 hundred-thousandths.

4. Find the sum of 3 units and 25 hundredths; 6 units and 4 tenths; and 35 hundredths.

5. Add 21.611; 6888.32; 3.4167. 6913.3477

6. Add 6.61; 636.1; 6516.14; 67.1234; and 5.1233.

7. Add 4 and 8 tenths; 43 and 31 hundredths; 74 and 19 thousandths; 11 and 204 thousandths.

8. Add 45 and 19 thousandths; 7 and 71 hundred-thousandths; 93 and 4327 ten-thousandths; 6 and 401 ten-thousandths.

9. Add 432 and 432 thousandths; 61 and 793 ten-thousandths; 100 and 7794 hundred-thousandths; 6.009; 1000 and 1001 ten-thousandths.

10. Add 16 and 41 thousandths; 9 and 94 millionths; 33 and 27 hundredths; 8 and 969 thousandths; 32 and 719906 millionths.

11. Add 204 and 9 ten-thousandths; 103 and 9 hundred-millionths; 42 and 9099 millionths; 430 and 99 hundredths; 220.0000009.

12. Add 35 ten-thousandths; .00035; 35 millionths, and 35 ten-millionths.

LESSON 115

Name _____

TEST ARTICLE 143

Date _____

OBJECTIVE(S)

- Add decimal numbers

Directions: Children complete the following problems involving addition of decimal numbers.

1. Add 3.12; 41.3; 68.94; 39.77.

2. 18 and 54 hundredths + 19 and 5 tenths + 53 and 73 hundredths + 37 and 56 hundredths + 16 and 9 tenths =?

3. 5 and 17 thousandths + 73 and 29 hundredths + 128 and 3 tenths + 94 and 983 thousandths + 26 and 71 hundredths -)- 271 and 7 tenths = ?

4. Add 413 thousandths; 413 ten-thousandths; 413 hundred-thousandths, and 413 millionths.

5. 25.7 + 6.009 + .4309 + 509.7 + 38.08 + 8.983 + 73.38 = ?

6. Add 46 and 89 thousandths; 60 and 894 thousandths; 8 and 946 thousandths; 9 and 468 thousandths; 89 and 46 thousandths; 460 and 89 thousandths, and 20.

7. Add 400.009; 40.09; 4.0009; 40.9; 400.09; 4.009; 100; and .002.

8. 738.84 + 388.47 + 884.73 + 847.38 + 473.88+59.99 + 59.099 + 99.59 = ?

9. Add 17.38; 18.37; 19.36; 20.35; 21.34; 22.33; 23.32; 24.31 and 25.3.

10. Write 395.4276 seven times and add.

11. Write 234.056 eight times and add.

12. Add 893 thousandths; 753 hundredths; 49 tenths; 3739 thousandths; 5 hundredths; 55 hundredths; 5500, and 127 thousandths.

13. 46.8 + 48.6 + 68.4 + 64.8 + 84.6 + 86.4 + 44.4 + 66.6 + 88.8 = ?

14. Add 74 and 8 ten-thousandths; 36 and 5-thousandths; 637 and 4 ten-millionths; 29 and 8 tenths; 3 and 8914 hundred-thousandths; 55 and 93 hundredths; 84 millionths, and 637 and 27306 ten-millionths.

LESSON 116

Name _____

PRACTICAL ARTICLE 144 Date _____

OBJECTIVE(S)

- Subtract decimal numbers

Directions: Solve the following problems involving subtraction of decimal numbers.

1. From 729.835 subtract 461.5738.

2. From 97.5168 subtract 38.25942.

3. From 20.014 subtract 7.0021.

4. From 5.03 subtract 2.115.

5. From 24.0042 subtract 13.7013.

6. From 170.0035 subtract 68.00181.

7. From .0142 subtract .005.

8. From .05 subtract .0024.

9. From 13.5 subtract 8.037.

10. From 3 subtract .00003.

11. From 29.0029 subtract 19.003.

12. From 5 subtract .125.

13. From 1 thousand subtract 1 ten-thousandth.

14. From 1 subtract 1 millionth.

15. From 25 thousandth take 25 millionths.

LESSON 117

Name _____

TEST ARTICLE 144 Date _____

OBJECTIVE(S)

- Subtract decimal numbers

Directions: Solve the following problems involving subtraction of decimal numbers.

1. From 47.378 take 19.89.

2. From 60.06 take 50.89.

3. From 48.937 take 13.0609.

4. From 300 take 46.875.

5. From 345.6789 take 88.88.

6. Take 8.76 from 234.372.

7. Take 23.9564 from 32.404.

8. Take 22.222 from 111.11.

9. Take 6.0008 from 22.93004.

Find the difference between the following:

10. 39.81 and 20.985.

11. 100.001 and 50.09.

12. 324.137 and 199.9994.

13. 64 thousandths and 64 hundredths.

14. From 147 and 39602 hundred-thousandths take 58 and 545986 millionths.

15. Take 73421 and 397 ten-thousandths from 124316 and 397 thousandths.

LESSON 118

Name _____

PRACTICAL ARTICLE 145-147 Date _____

OBJECTIVE(S)

- Multiply decimal numbers.

Directions: Multiply the following decimal numbers.

1. Multiply 2.149 by 6.34.

2. Multiply .0276 by .035.

3. Multiply 2.075 by 100.

4. Multiply 33.21 by 4.41.

5. Multiply 32.16 by 22.5.

6. Multiply .125 by 9.

7. Multiply .35 by 7.

8. Multiply .2 by .8.

9. Multiply .02 by .4.

10. Multiply .15 by .7.

11. Multiply 125.015 by .001.

12. Multiply .135 by .005.

13. Multiply 1.035 by 17.

14. Multiply 19 by .125.

15. Multiply 4.5 by 4.

16. Multiply .625 by 64.

17. Multiply 61.76 by .0071.

18. Multiply 1.325 by .0716.

19. Multiply 4.87 by 10.

20. Multiply 5.3 by 100.

21. Multiply 17.62 by 100.

22. Multiply 1.01 by 10.

23. Multiply .0001 by 100.

24. Multiply 1 tenth by 1 hundredth.

25. Multiply 1 hundred by 1 ten-thousandth.

26. Multiply 43 thousandths by 21 ten-thousandths.

27. Multiply 40000 by 1 millionth.

28. Multiply .09375 by 1.064.

LESSON 119

Name _____

TEST ARTICLE 147 Date _____

OBJECTIVE(S)

- Multiply decimal numbers.

Directions: Multiply the following decimal numbers.

1. .643 by .89.

2. 3.56 by 62.5.

3. 7.875 by 94.

4. .125 by .126.

5. 48.76 by 48.75.

6. .03 by .02.

7. .744 by .125.

8. .0375 by .036.

9. 9.9 * 098.

10. 666. * 5.55.

11. .048 * .04375.

12. .9375 * 2400.

13. 7.39 * .0043.

14. .2502 * .0848

15. 42.075 * 100.

16. 3.956 * 42.75

LESSON 120

Name _____

PRACTICAL ARTICLE 148-150 Date _____

OBJECTIVE(S)

- Divide decimal numbers.

Directions: Divide the following decimal numbers.

1. Divide 2.125 by .5.

2. Divide .048 by .006.

3. Divide .3 by .004.

4. Divide 83.1 by 4.

5. Divide 2.11 by 3.

6. Divide 475.6 by 100.

7. Divide 1.125 by .03.

8. Divide 86.075 by 27.5.

9. Divide 24.73704 by 3.44.

10. Divide 206.166492 by 4.123.

11. Divide .96 by .24.

12. Divide .0425 by .0085.

13. Divide 21 by .5.

14. Divide 2 by .008.

15. Divide 37.2 by 5.

16. Divide 100.8788 by 454.

17. Divide .000343 by 3.43.

18. Divide 9811.0047 by .108649.

19. Divide .21318 by .19.

20. Divide 102048 by .3189.

21. Divide .102048 by 3189.

22. Divide 9.9 by .0225.

23. Divide 872.6 by 100.

24. Divide 4.5 by 1000.

25. Divide 400 by 10000.

26. Divide 1 tenth by 10.

27. Divide 1 by 1 tenth.

28. Divide 10 by 1 hundredth.

29. Divide 1.7 by 64.

30. Divide .08 by 80.

31. Divide 1.5 by 7.

32. Divide 11.1 by 32.76.

33. Divide .0123 by 3.21.

LESSON 121

Name _____

TEST ARTICLE 150 Date _____

OBJECTIVE(S)

- Divide decimal numbers.

Directions: Divide the following decimal numbers.

1. 5.845 by 3.5

2. 9.4125 by 1.25

3. .7614 by .36

4. 2.875 by 1.15

5. 4.752 by 198

6. .897 by .06

7. .897 by 260

8. .7375 by .059

9. 1287.7651 by 3.217

10. 160 by .04

11. 6.5667 by 31.27

12. 17429.1 by .4251

13. 3.1 by 3.2

14. .004 by 160

15. 8.91 by 1.98

16. 1 by 16

17. Divide 37 units and 37 thousandths by 4 units and 4 thousandths

18. Divide 12 units and 12 hundredths by 16 units and 16 hundredths

19. Divide 1 hundred by 1 hundredth

20. Divide 208 millionths by 65 hundred-thousandths

21. Divide 8.76 by 132

22. Divide .9 by 2.99

23. Divide .001 by 150

24. Divide 27.5 by .28

LESSON 122

Name _____

PRACTICAL ARTICLE 151 Date _____

OBJECTIVE(S)

- Reduce decimals via multiplication.

Directions: Reduce decimal numbers to lower denominations by multiplication.

1. Reduce .05 gal. to the decimal of a pint.

2. Reduce .035 pk. to the decimal of a pint.

3. Reduce .0075 bu. to the decimal of a quart.

4. Reduce .005 yd. to the decimal of an inch.

5. Reduce .00546875 A. to the decimal of a square rod.

LESSON 123

Name _____

TEST ARTICLE 151 Date _____

OBJECTIVE(S)

- Reduce decimals via multiplication.

Directions: Reduce decimal numbers to lower denominations by multiplication.

1. Reduce .0125 bu. to the decimal of a pint.

2. Reduce .0273 gal. to the decimal of a pint.

3. Reduce .00043 T. to the decimal of a pound.

4. Reduce .0275 yd. to the decimal of an inch.

5. Reduce .0000075 sq. mi. to the decimal of a sq. rd.

6. Reduce .0000025 cu. yd. to the decimal of a cu. in.

7. Reduce .00001125 da. to the decimal of a second.

8. Reduce .00375 C. to the decimal of a cu. ft.

9. Reduce .000575 sq. yd. to the decimal of a sq. in.

LESSON 124

Name _____

PRACTICAL ARTICLE 152 Date _____

OBJECTIVE(S)

- Find the value of decimal numbers in integers

Directions: Children convert decimal numbers to integer values.

1. Find the value of .3125 bu. in integers.

2. Find the value of .75 yd. in integers.

3. Find the value of .3375 A. in integers.

4. Find the value of .7 lb. Troy in integers.

5. Find the value of .8125 bu. in integers.

6. Find the value of .44 mi. in integers.

7. Find the value of .33625 cwt. in integers.

LESSON 125

Name _____

TEST ARTICLE 152 Date _____

OBJECTIVE(S)

- Find the value of decimal numbers in integers

Directions: Find the value of the following, in integers:

1. .4375 bu.

2. .4375 gal.

3. .15625 T.

4. .15625 mi.

5. .390625 sq. mi.

6. .7 C.

7. .38 yr.

8. .047 of a circle.

LESSON 126

Name _____

PRACTICAL ARTICLE 153 Date _____

OBJECTIVE(S)

- Reduce decimals to higher denominations by division

Directions: Divide to reduce decimal values.

1. Reduce .64 pt. to the decimal of a gallon.

2. Reduce .72 qt. to the decimal of a bushel.

3. Reduce .77 yd. to the decimal of a mile.

4. Reduce .25 pt. to the decimal of a gallon.

5. Reduce .6 pt. to the decimal of a bushel.

6. Reduce .7 rd. to the decimal of a mile.

LESSON 127

Name _____

TEST ARTICLE 153 Date _____

OBJECTIVE(S)

- Reduce decimals to higher denominations by division

Directions: Divide to reduce decimal values.

1. Reduce .352 pt. to the decimal of a bushel.

2. Reduce .48 gi. to the decimal of a gallon.

3. Reduce .648 sq. in. to the decimal of a sq. yd.

4. Reduce .5832 cu. in. to the decimal of a cu. yd.

5. Reduce .472 qt. to the decimal of a bushel.

6. Reduce .486 min. to the decimal of a day.

7. Reduce .4096 oz. to the decimal of a cwt.

8. Reduce .39 pt. to the decimal of a gallon.

9. Reduce .1296 sec. to the decimal of a day.

10. Reduce .015 pt. to the decimal of a bushel.

11. Reduce .13824 cu. in. to the decimal of a cord.

12. Reduce .17532 hr. to the decimal of a year.

13. Reduce .792 in. to the decimal of a mile.

14. Reduce 7.68 oz. to the decimal of a ton.

15. Reduce .17424 sq. in. to the decimal of an acre.

LESSON 128

Name _____

PRACTICAL ARTICLE 154 Date _____

OBJECTIVE(S)

- Solve the following miscellaneous problems involving decimal numbers.

Directions: Children complete the following problems involving decimal values.

1. What is the cost of 9 yd. flannel, at $0.40 per yard, and 12 yd., at $0.75 per yard?

2. What is the cost of 2.3 yd. of ribbon, at $0.45 per yard, and 1.5 yd., at $0.375 per yard?

3. What is the cost of 16.25 yd. of cloth, at $2.6875 per yard?

4. At $0.75 per bushel, how much wheat can be bought for $35.25?

5. At $2.5625 per yard, how much cloth can be bought for $98.40?

6. What will 6 cwt. 50 lb. of hops cost at $3.25 per hundred-weight?

7. What will 14 bu. 3 pk. 4 qt. of corn cost, at $0,625 per bushel?

8. What will 13 A. 115 sq. rd. of land cost, at $17.28 per acre?

9. At $0.3125 per bushel, how much corn can be bought for $9.296875?

10. At $4.32 per acre, how much land can be bought for $59,265?

11. If 63 gal. of wine cost $49, what will 464 gal. cost?

12. Add .34 yd., 1.07 ft. and 8.92 in.

13. Add .625 gal. and .75 qt.

14. From 1.53 yd. subtract 2 ft. 3.08 in.

15. From .05 yr. subtract .5 hr.

16. From .41 da. subtract .16 hr.

17. Find the value of .3 yr. in integers.

18. What is the cost of 343 yd. 2 ft. 3 in. of tubing, at $0.16 per yard?

19. At $690.35 per mile, what is the cost of a road 17 mi. 135 rd. long?

LESSON 129

Name _____

TEST ARTICLE 154 Date _____

OBJECTIVE(S)

- Solve the following miscellaneous problems involving decimal numbers.

Directions: Children complete the following problems involving decimal values.

1. Find the value of .05 da. in integers.

2. If 3.7 yards cost $10.36, what will 5.8 yards cost?

3. If 3.5 acres of land cost $430.43, how many acres could be bought for $614.90?

4. Find the cost of 4 bu. 3 pk. of oats, at 46 cents a bushel.

5. A man sold 55 gal. 1 pt. of wine, at $1.80 a gallon, and was paid in tea at 84 ct. a pound; how many pounds did he receive?

6. A field 40 rods wide contains 10 A. 80 sq. rd.; how long is it?

7. How much wood, at $2.90 a cord, can be bought for $105,125?

8. .4 mi. + .3 rd. + .7 yd. = ?

9. Find the value of .7475 T. in integers.

10. How much vinegar, at 24 ct. a gallon, can be bought for $7.77?

11. What cost 1000 cu. yd. of embankment, at the rate of $0.37 per cu. ft.?

12. Find the value of .234375 bu. in integers.

13. What cost 7227 feet of wire fence, at 14 ct. a rod?

14. A locomotive runs 17 mi. 32 rd. in an hour; how far will it run in 13 hr. 39 min.?

15. .1 yr. + .2 wk. + .3 da. + .4 hr. = ?

16. Reduce 4/9 of $\frac{13\ 1/2}{16}$ to a decimal.

17. 1.4 bu. — 3.7 pk. =?

18. How much land, at $500 an acre, can be bought for $131.25?

19. .03 T. + .73 cwt. + .75 lb. =?

20. Find the cost of 7 lb. 7 oz. of silverware, at $1.20 an ounce.

21. How much cloth, at $1.44 a yd., must be given for 6 bu. 6 qt. of strawberries, worth $4.80 a bushel?

22. At 12 1/2 ct. a pound, how much cheese can be bought for $19.81|?

23. What cost 4350 lb. iron, at $2.80 a hundred pounds?

24. What cost 8764 pickles, at 75 et. a hundred?

25. What cost 108 screws, at $1.08 per gross?

26. Find the value of .77 yr. in integers.

27. A locomotive runs 16 mi. 256 rd. per hour; how long will it be in running 154 mi. 280 rd.?

28. A man can earn 18| ct. per hour, and a boy 12£ ct.; how much will the man earn while the boy earns $4?

29. Grading a road cost $10312.50, at 62 ct. 5 m. per foot; how long is the road?

30. Find the value of a lot 70 rods square, at $20 an acre.

LESSON 130

Name _____

INTELLECTUAL LESSON 47 Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of monetary units.

Directions: Children complete the following conversion problems involving monetary units.

UNITED STATES MONEY.

10 mills, marked	m.,	are 1 cent,	marked	ct.
10 cents,		" 1 dime,	"	d.
10 dimes or 100 cents		" 1 dollar,	"	$.
10 dollars		" 1 eagle,	"	E.

1. How many mills in 2 cents?

2. How many mills in:

   a. 3 cents? _____ b. 4 cents? _____

   c. 5 cents? _____ d. 6 cents? _____

   e. 7 cents? _____ f. 8 cents? _____

   g. 9 cents? _____

3. How many cents in:

   a. 2 dimes? _____ b. 3 dimes? _____

   c. 4 dimes? _____ d. 5 dimes? _____

   e. 6 dimes? _____ f. 7 dimes? _____

   g. 8 dimes? _____ h. 9 dimes? _____

4. How many dimes in:

   a. 2 dollars? _____ b. 3 dollars? _____

   c. 4 dollars? _____ d. 5 dollars? _____

   e. 6 dollars? _____ f. 7 dollars? _____

   g. 8 dollars? _____ h. 9 dollars? _____

5. How many dollars in:

   a. 2 eagles? _____ b. 3 eagles? _____

   c. 4 eagles? _____ d. 5 eagles? _____

   e. 6 eagles? _____ f. 7 eagles? _____

   g. 8 eagles? _____ h. 9 eagles? _____

6. How many cents in 2 dollars?

7. How many cents in:

   a. 3 dollars? _____ b. 4 dollars? _____

   c. 5 dollars? _____ d. 6 dollars? _____

   e. 7 dollars? _____ f. 8 dollars? _____

   g. 9 dollars? _____

8. Twenty cents are how many dimes?

9. How many dimes are:

a. 30 cents? _____ b. 40 cents? _____

c. 50 cents? _____ d. 60 cents? _____

e. 70 cents? _____ f. 80 cents? _____

g. 90 cents? _____

10. How many dollars are:

a. 20 dimes? _____ b. 30 dimes? _____

c. 40 dimes? _____ d. 50 dimes? _____

e. 60 dimes? _____ f. 70 dimes? _____

g. 80 dimes? _____ h. 90 dimes? _____

11. Two hundred cents are how many dollars?

12. How many dollars are:

a. 300 cents? _____ b. 400 cents? _____

c. 500 cents? _____ d. 600 cents? _____

e. 700 cents? _____ f. 800 cents? _____

g. 900 cents? _____

LESSON 131

Name _____

INTELLECTUAL LESSON 48

Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of dry measure units.

Directions: Children complete the following conversion problems involving dry measure.

DRY MEASURE.

2 pints (pt.)	are 1 quart,	marked	qt.
8 quarts	" 1 peck,	"	pk.
4 pecks	" 1 bushel,	"	bu.

1. How many pints in:

   a. 2 quarts? _____ b. 3 quarts? _____

   c. 4 quarts? _____ d. 5 quarts? _____

   e. 6 quarts? _____ f. 7 quarts? _____

2. How many quarts in:

   a. 2 pecks? _____ b. 3 pecks? _____

3. How many pecks in:

   a. 2 bushels? _____ b. 3 bushels? _____

   c. 4 bushels? _____ d. 5 bushels? _____

   e. 6 bushels? _____ f. 7 bushels? _____

   g. 8 bushels? _____ h. 9 bushels? _____

   i. 10 bushels? _____ j. 11 bushels? _____

k. 12 bushels? _____

4. How many quarts are:

a. 4 pints? _____ b. 6 pints? _____

c. 8 pints? _____ d. 10 pints? _____

e. 12 pints? _____ f. 14 pints? _____

5. How many pecks are:

a. 16 quarts? _____ b. 24 quarts? _____

6. How many bushels are:

a. 8 pecks? _____ b. 12 pecks? _____

c. 16 pecks? _____ d. 20 pecks? _____

e. 24 pecks? _____ f. 28 pecks? _____

7. Reduce 3 qt. 1 pt. to pints.

8. Reduce 3 pk. 5 qt. to quarts.

9. Reduce 3 bu. 2 pk. to pecks.

10. Reduce 2 pk. 3 qt. 1 pt. to pints.

11. Reduce 2 bu. 3 pk. 7 qt. to quarts.

12. Reduce 1 bu. 2 pk. 2 qt. 1 pt. to pints.

13. Reduce 7 pt. to quarts.

14. How many quarts are:

    a. 9 pints? _____ b. 11 pints? _____

    c. 13 pints? _____ d. 15 pints? _____

15. How many pecks are:

    a. 10 quarts? _____ b. 11 quarts? _____

    c. 12 quarts? _____ d. 13 quarts? _____

    e. 17 quarts? _____ f. 19 quarts? _____

    g. 23 quarts? _____ h. 27 quarts? _____

16. How many bushels are:

    a. 10 pecks? _____ b. 13 pecks? _____

    c. 15 pecks? _____ d. 17 pecks? _____

    e. 23 pecks? _____

17. Reduce 27 pt. to pecks.

18. How many pecks are:

a. 35 pints? _____ b. 39 pints? _____

c. 43 pints? _____ d. 45 pints? _____

19. How many bushels are:

a. 53 quarts? _____ b. 55 quarts? _____

c. 57 quarts? _____ d. 59 quarts? _____

20. How many bushels are:

a. 83 quarts? _____ b. 86 quarts? _____

c. 89 quarts? _____ d. 92 quarts? _____

21. How many bushels are:

a. 223 pints? _____ b. 224 pints? _____

c. 226 pints? _____ d. 228 pints? _____

22. How many bushels are:

a. 345 pints? _____ b. 346 pints? _____

c. 347 pints? _____ d. 348 pints? _____

23. Reduce 6 bu. 2 qt. to quarts.

24. Reduce 2 bu. 1 pt. to pints.

25. Reduce 4 bu. 2 pk. to pints.

26. Reduce 3 bu. 7 qt. 1 pt. to pints.

27. Reduce 5 bu. 3 pk. 1 pt. to pints.

28. Reduce 7 bu. 3 pk. 7 qt. to pints.

LESSON 132

Name _____

INTELLECTUAL LESSON 49

Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of liquid measure units.

Directions: Children complete the following conversion problems involving liquid measure.

LIQUID MEASURE.

4 gills (gi.)	are	1 pint,	marked	pt.
2 pints	"	1 quart,	"	qt.
4 quarts	"	1 gallon,	"	gal.

1. How many pints in:

   a. 2 quarts? _____ b. 3 quarts? _____

2. How many quarts in:

   a. 2 gallons? _____ b. 3 gallons? _____

   c. 4 gallons? _____ d. 5 gallons? _____

   e. 6 gallons? _____ f. 7 gallons? _____

   g. 8 gallons? _____ h. 9 gallons? _____

   i. 10 gallons? _____ j. 11 gallons? _____

   k. 12 gallons? _____

3. How many pints are:

   a. 5 gills? _____ b. 6 gills? _____

   c. 7 gills? _____

4. How many quarts are:

   a. 3 pints? _____ b. 4 pints? _____

   c. 5 pints? _____ d. 6 pints? _____

   e. 7 pints? _____

5. How many gallons are:

   a. 5 quarts? _____ b. 6 quarts? _____

   c. 7 quarts? _____ d. 8 quarts? _____

   e. 9 quarts? _____ f. 10 quarts? _____

   g. 11 quarts? _____ h. 12 quarts? _____

6. How many gills in:

   a. 1 quart? _____ b. 2 quarts? _____

   c. 3 quarts? _____

7. How many pints in:

   a. 1 gallon? _____ b. 2 gallons? _____

   c. 3 gallons? _____ d. 4 gallons? _____

   e. 5 gallons? _____

8. How many gills in:

   a. 1 gallon? _____ b. 2 gallons? _____

   c. 3 gallons? _____ d. 4 gallons? _____

   e. 5 gallons? _____

9. Reduce 1 pt. 3 gi. to gills.

10. Reduce 3 qt. 1 pt. to pints.

11. Reduce 5 gal. 2 qt. to quarts.

12. Reduce 2 qt. 1 pt. 1 gi. to gills.

13. Reduce 4 gal. 3 qt. 1 pt. to pints.

14. Reduce 1 gal. 1 qt. 1 pt. 3 gi. to gills.

15. Reduce 13 gi. to quarts.

16. Reduce 23 pt. to gallons.

17. Reduce 79 gi. to gallons.

18. Reduce the following to gallons:

    a. 97 gills? _____ b. 98 gills? _____

    c. 100 gills? _____ d. 102 gills? _____

19. Reduce the following to gallons:

    a. 187 gills? _____ b. 188 gills? _____

    c. 190 gills? _____ d. 192 gills? _____

20. Reduce 6 gal. 2 pt. to gills.

21. Reduce 8 gal. 3 gi. to gills.

22. Reduce 10 gal. 10 qt. 10 pt. to gills.

LESSON 133

Name _____

INTELLECTUAL LESSON 50

Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of liquid measure units.

Directions: Children complete the following conversion problems involving liquid measure.

AVOIRDUPOIS WEIGHT.

16 drams (dr.)	are	1 ounce,	marked	oz.
16 ounces	"	1 pound,	"	lb.
100 pounds	"	1 hundred-weight,	"	cwt.
20 hundred-weights	"	1 ton,	"	T.

1. How many drams in:

   a. 2 ounces? _____ b. 3 ounces? _____

   c. 4 ounces? _____ d. 5 ounces? _____

   e. 6 ounces? _____

2. How many ounces in:

   a. 2 pounds? _____ b. 3 pounds? _____

   c. 4 pounds? _____ d. 5 pounds? _____

   e. 6 pounds? _____ f. 10 pounds? _____

3. How many pounds are:

   a. 2 cwt.? _____ b. 3 cwt.? _____

   c. 4 cwt.? _____ d. 5 cwt.? _____

   e. 6 cwt.? _____ f. 7 cwt.? _____

   g. 8 cwt.? _____ h. 9 cwt.? _____

4. How many hundred-weights are:

   a. 2 tons? _____ b. 3 tons? _____

   c. 4 tons? _____ d. 5 tons? _____

   e. 6 tons? _____

5. How many ounces are:

   a. 20 dr.? _____ b. 27 dr.? _____

   c. 35 dr.? _____

6. How many pounds are:

   a. 42 oz.? _____ b. 53 oz.? _____

   c. 75 oz.? _____ d. 80 oz.? _____

   e. 96 oz.? _____

7. How many hundred-weights are:

   a. 300 pounds? _____ b. 450 pounds? _____

   c. 575 pounds? _____ d. 1200 pounds? _____

8. How many tons are:

   a. 40 cwt.? _____ b. 50 cwt.? _____

   c. 75 cwt.? _____ d. 80 cwt.? _____

   e. 96 cwt.? _____

9. How many ounces in 1/2 lb.?

10. How many ounces in:

    a. 1/2 lb.? _____ b. 3/4 lb.? _____

11. How many pounds in:

    a. 1/2 cwt.? _____ b. 1/4 cwt.? _____

    c. 3/4 cwt.? _____ d. 1/5 cwt.? _____

    e. 2/5 cwt.? _____ f. 3/5 cwt.? _____

    g. 4/5 cwt.? _____

12. Reduce 4 oz. 11 dr. to drams.

13. Reduce 10 lb. 10 oz. 11 dr. to drams.

14. Reduce 15 cwt. 45 lb. to pounds.

15. Reduce 4 T. 10 cwt. 75 Ib. to pounds.

16. Twelve ounces are what part of a pound?

17. How many pounds are:

    a. 8 oz.? _____ b. 10 oz.? _____

    c. 14 oz.? _____

18. How many hundred-weights are:

    a. 10 lb.? _____ b. 20 lb.? _____

    c. 25 lb.? _____ d. 40 lb.? _____

    e. 50 lb.? _____ f. 60 lb.? _____

    g. 75 lb.? _____ h. 80 lb.? _____

19. How many tons are:

    a. 5 cwt.? _____ b. 6 cwt.? _____

    c. 8 cwt.? _____ d. 10 cwt.? _____

    e. 12 cwt.? _____ f. 15 cwt.? _____

    g. 16 cwt.? _____ h. 18 cwt.? _____

LESSON 134

Name _____

INTELLECTUAL LESSON 51 Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of long measure units.

Directions: Children complete the following conversion problems involving long measure.

LONG MEASURE.

12	inches (in.)	are	1 foot,	marked	ft.
3	feet	"	1 yard,	"	yd.
5½	yards	"	1 rod,	"	rd.
40	rods	"	1 furlong,	"	fur.
8	furlongs	"	1 mile,	"	mi.

1. How many inches in 2 ft?

2. How many feet in:

   a. 2 yd.? _____ b. 3 yd.? _____

   c. 4 yd.? _____ d. 5 yd.? _____

3. How many yards in:

   a. 2 rd.? _____ b. 4 rd.? _____

   c. 5 rd.? _____ d. 7 rd.? _____

   e. 10 rd.? _____

4. How many rods in:

   a. 3 fur.? _____ b. 4 fur.? _____

   c. 5 fur.? _____ d. 6 fur.? _____

   e. 7 fur.? _____ f. 9 fur.? _____

5. How many furlongs in 9 miles?

6. How many feet are:

   a. 36 in.? _____ b. 48 in.? _____

7. How many yards are:

   a. 15 ft.? _____ b. 21 ft.? _____

8. How many rods are:

   a. 22 yd.? _____ b. 33 yd.? _____

9. Six hundred and forty rd. are how many miles?

10. What is the value of 5/6 yd.?

11. What is the value of:

    a. 2/3 ft.? _____ b. 3/4 ft.? _____

12. What is the value of:

a. 2/3 yd.? _____ b. 3/4 yd.? _____

13. What is the value of:

a. 6/11 rd.? _____ b. 1/2 rd.? _____

c. 2/3 rd.? _____ d. 2/5 rd.? _____

14. What is the value of:

a. 1/4 mi.? _____ b. 1/3 mi.? _____

c. 2/3 mi.? _____ d. 3/4 mi.? _____

e. 2/5 mi.? _____

15. Sixteen rd. are what part of a mile?

16. Twenty-four rd. are what part of a mile?

17. Three yd. are what part of a rod?

18. Two ft. are what part of a:

a. yard? _____ b. rod? _____

19. Six in. are what part of a:

a. foot? _____ b. yard? _____

c. rod? _____

LESSON 135

Name _____

INTELLECTUAL LESSON 52 Date _____

OBJECTIVE(S)

- Solve the following problems involving conversion of time units.

Directions: Children complete the following conversion problems involving time measure.

TIME TABLE.

60 seconds (sec.)	are	1 minute,	marked	min.
60 minutes	"	1 hour,	"	hr.
24 hours	"	1 day,	"	da.
365 days	"	1 common year,	"	c. yr.
366 days	"	1 leap-year,	"	l. yr.
100 years	"	1 century,	"	cen.
7 days	"	1 week,	"	wk.
4 weeks	"	1 month,	"	mon.
12 calendar months	"	1 year,	"	yr.

1. What is the value of:

   a. 1/2 min.? _____ b. 1/3 min.? _____

   c. 2/3 min.? _____ d. 3/4 min.? _____

2. What is the value of:

   a. 1/5 hr.? _____ b. 2/5 hr.? _____

   c. 3/5 hr.? _____ d. 4/5 hr.? _____

   e. 1/6 hr.? _____ f. 5/6 hr.? _____

   g. 1/7 hr.? _____

3. What is the value of:

   a. 1/2 da.? _____ b. 2/3 da.? _____

   c. 5/6 da.? _____ d. 2/7 da.? _____

   e. 3/8 da.? _____ f. 7/10 da.? _____

4. What is the value of:

   a. 3/7 wk.? _____ b. 5/7 wk.? _____

5. What is the value of:

   a. 1/2 mon.? _____ b. 3/4 mon.? _____

   c. 2/7 mon.? _____ d. 6/7 mon.? _____

   e. 9/14 mon.? _____ f. 13/14 mon.? _____

6. Twenty sec. are what part of a minute?

7. Fifty min. are what part of an hour?

8. Twelve hr. are what part of a:

   a. day? _____ b. week? _____

9. Five days are what part of a week?

10. Eight calendar months are what part of a year?

11. Three hr. 30 min. are what part of a day?

12. Three da. 12 hr. are what part of a week?

13. One wk. 3 da. are what part of a month?

14. One wk. 3 da. 16 hr. are what part of a month?

15. How many days in April and May taken together?

January,	1st	month,	31	days.
February,	2d	"	28 or 29	"
March,	3d	"	31	"
April,	4th	"	30	"
May,	5th	"	31	"
June,	6th	"	30	"
July,	7th	"	31	"
August,	8th	"	31	"
September,	9th	"	30	"
October,	10th	"	31	"
November,	11th	"	30	"
December,	12th	"	31	"

16. How many days in June, July, and August taken together?

17. How many days in September, October, and November taken together?

18. How many days from July 12 to July 28?

19. How many days from October 27 to December 25?

20. How many days from the Vernal Equinox, March 20, to the Autumnal Equinox, September 22?

21. How many days from the Summer Solstice, June 21, to the Winter Solstice, December 21?

LESSON 136

Name _____

INTELLECTUAL LESSON 53 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. What is the cost of 5 bu. 3 pk. of corn, at 60 cents a bushel?

2. When milk is 5 cents a pint, what does a milkman get for 4 gal. 2 qt. 1 pt.?

3. At 10 cents a pound, what will be the cost of 7 lb. 12 oz. sugar?

4. What will it cost to build a fence 5 rd. 2 yd. 2 ft. 3 in. long, at $12 a rod?

5. A steamer from Milwaukee to Grand Haven, at the average rate of 9 miles an hour, was 9 hr. 26 min. 40 sec. in making the trip: what is the distance?

6. How much wine, at $8 a gallon, can be purchased for $23?

7. How much coffee, at 30 cts. per lb., can be bought for $5?

8. Add 8/10 da. and 2/5 hr.

9. Add 1/3 rd., 1/2 yd., and 3/4 ft.

10. From 3/8 bu., take 3/4 pk.

11. If 1 bu. 3 pk. of oats are worth 70 ct., what are 2 bu. 1 pk. 4 qt. worth.

12. If a wagon-wheel goes 3 yd. 1 ft. in making 1 revolution: how far will it go in making 7 revolutions?

13. If 2/3 T. of hay cost $8, what will 3 cwt. 75 lb. cost?

14. The time by rail from Cincinnati to Dayton, a distance of 60 miles, is 2 hr. 24 min., what is the rate of travel per hour of the train?

15. If a cart-wheel makes 1 revolution in going 3 yd. 1 ft. 6 in., how many revolutions will it make in going 1 rd. 5 yd.?

16. How many weeks in April, May, and June taken together?

17. I bought some roasted Java coffee for $2 and 35 ct., paying 40 ct. a lb.: how many lb. and oz. did I buy?

18. If there are 3 gal. in a dozen bottles of wine, how much will 3 dozen bottles cost, at 50 ct. a quart?

19. If 2 bu. 3 pk. of corn cost $1 and 65 ct.: how much is that a bushel?

20. If there are 25 bu. in a ton of coal, how much will 150 bu. cost, at $3 and 75 ct. a ton? How much a bushel?

21. A lot is 50 ft. wide, and 100 ft. long: how much will it cost to put a fence around it, at $5 a rod?

LESSON 137

Name _____

INTELLECTUAL LESSON 54 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. A merchant bought at one time 33 gallons of oil; at another, 20 gallons; at another, 50; and at another, 62: how many gallons did he buy in all?

2. A lady paid $23 for a dress, $18 for a shawl, and $9 for a bonnet: what did she pay for all?

3. I owe A $50, B $75, C $40, and D $20: how much money do I owe altogether?

4. Having $92, I purchased a watch for $73: how much money had I left?

5. A man bought a horse for $110, and sold him for $145: how much did he make?

6. George bought candles for 25 ct., soap for 10 ct., sugar for 35 ct., and starch for 3 ct.; he gave the grocer $1, and received 30 ct. change: how much was this incorrect?

7. A boy had $5, from which he took at one time $1 and 50 ct.; at another, 40 ct.; at another, $1 and 10 ct.: how much money had he left?

8. What will be the cost of 5 yd. of cloth, at $2 and 50 ct. a yard?

9. A man traveling at the rate of 5 miles an hour, meets a stage going at the rate of 9 miles an hour: how far apart will they be in 10 hours?

10. Bought 15 lb. of sugar, at 11 ct. a pound, and 13 lb., at 9 ct. a pound, what did the whole cost?

11. Henry has 19 ct., George 3 times as many, lacking 10 ct.: how many have both?

12. How many yards in 3 bales of cloth, each containing 5 pieces, of 40 yd. each?

13. If a boat sails 48 miles in 12 hours, how far will it sail in 7 hours?

14. At 15 ct. a pound, how many pounds of beef can be purchased for $6?

15. Three men bought a horse for $90; after keeping him 6 weeks, at $3 a week, and the use of him being worth $42, they sold him for $99: what did each man make?

16. A farmer sold 12 bu. of corn, at 45 ct., and 8 bu. of wheat, at 95 ct. a bushel; he then bought 7 yd. of cloth, at 80 ct. a yard, and spent the balance for coffee, at 33 1/3 ct. a pound: how much coffee did he buy?

17. If I buy 9 bbl. of flour, at $6.50 a barrel, and 12 Ib. of sugar, at 12 1/2 ct. a pound: how many apples, at 60 ct. a bushel, will I have to sell to pay for them?

LESSON 138

Name _____

INTELLECTUAL LESSON 55 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. If 1/3 of a yd. of cloth cost $2, what will 1/4 of a yd. cost?

2. If 2/3 of a yd. of cloth cost $5, what will 3/4 of a yd. cost?

3. If 2/5 of a bbl. of flour cost $3, what will 2/3 of a bbl. cost?

4. If 4/7 of a yd. of flannel cost 24 cts., what will 5/14 of a yd. cost?

5. If 5/9 of a ton of hay cost $15, what will one-half a ton cost?

6. If 3/8 of an orchard contain 30 fruit trees, how many trees are there in 7/16 of it?

7. If 1 2/5 yd. of cloth cost $14, what will 2 1/2 yd. cost?

8. If 1 1/2 bbl. of flour cost $5 1/4, what will 2 1/2 bbl. cost?

9. If 3 1/3 Ib. of cheese cost 60 ct., what will 2 5/6 lb. cost?

10. A traveled 30 mi. in 3 3/4 hr.: at that rate, how far could he travel in 71/4 hr.?

11. If a man earns $1 1/4 in 10 hr., how much can he earn in 11 hr.?

12. A can earn $9 3/5 in 6 da., of 8 hr. each: how much can he earn in 7 da., of 9 hr. each?

13. If 5 3/4 bu. of wheat cost $9 1/5, what will 3 1/3 bu. cost?

14. If 8 1/3 is 5/7 of a number, what is 4/5 of it?

15. If 3 1/2 is 2 1/3 times some number, what is 2 1/2 times that number?

16. If 3/4 of a barrel of flour cost $4 1/2, what will 3/5 of a barrel cost?

17. If 2/3 of a yard of lace cost $3/5, what will 5/6 of a yard cost?

18. Two-thirds of 1 1/5 are 2/7 of what number?

19. Five-ninths of 5 2/5 are 8/9 of what number?

20. Four-sevenths of 4 3/8 are 5/11 of what number?

21. Five-sevenths of 5 4/9 are 7/10 of what number?

22. Two-thirds of 2 2/5 are 1/2 of how many times 2?

23. Three-fifths of 1 1/9 are 2/7 of how many times 4?

24. Three-fourths of 3 1/5 are 3/8 of how many times 3?

25. John has 10 marbles, and 4/5 of what John has are 8/11 of what James has: how many has James?

26. Jane received 3/5 of 60 plums; she gave away 4/9 of 3/4 of them: how many were left?

27. James has a given distance to travel; after going 35 mi., there remain 2/7 of the distance: when he has gone 3/7 of the remainder, how far must he then go?

28. A horse costs $40; 3/4 of the price of the horse = 6/5 of the price of a cart: what did the cart cost?

29. B's coat cost $27, and his hat $8; 4/9 of the cost of the coat + 3/4 that of the hat = 3/5 of the cost of his watch: what did the watch cost?

30. Mary lost 2/7 of her plums; she gave 2/5 of the remainder to Sarah, and had 6 plums left: how many had she at first?

31. John has 12 cents; 2/3 of his money = 1/2 of 4/5 of William's money: how much has William?

32. On counting their money, it was found that A had 12 cents more than B; and that 1/2 of B's money = 2/7 of A's: how much had each?

33. In an orchard, 1/3 are apple trees, 1/4 are pear trees, 1/12 are plum trees, and the remainder, which is 32, cherry trees: how many trees are there of each kind?

34. In an orchard of apple and pear trees, the latter are 2/9 of the whole; the apple trees are 25 more than the pear trees; how many are there of each?

LESSON 139

Name _____

INTELLECTUAL LESSON 56 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. What number added to itself will give a sum equal to 14?

2. What number added to itself 3 times will make 32?

3. Divide 16 in two parts, so that the second part shall be 3 times the first.

4. Divide 48 into two such parts, that the second shall be 7 times the first.

5. Divide 24 into three parts, so that the second shall be 2 times and the third 3 times the first.

6. Divide 45 into three parts, so that the second shall be three times and the third 5 times the first?

7. When 10 was taken from a number, 2/3 of it remained: what was the number?

8. The sum of two numbers is 25; if 10 is the number, what is their difference?

9. The sum of two numbers is 12; if 6 be added to the sum, the result will be twice the greater number; what are the numbers?

10. If 6 be taken from the difference of two numbers, the remainder will be 2; if 4 is one of the numbers, what is the other?

11. If 10 be added to the difference of two numbers, the sum will be 6 more than the greater number, which is 19: what is the less number?

12. If 10 be taken from the sum of two numbers, 8 will be left; if 5 is one of the numbers, what is the other?

13. The sum of two numbers is 16, and their difference 4: what are the numbers?

14. The sum of two numbers is 25, and their difference 5: what are the numbers?

15. The sum of two numbers is 31, and the greater exceeds the less by 7: what are the numbers?

16. Divide 15 cents between A and B, so that B may have 3 cents more than A.

17. Thomas has 5 apples more than James, and both together have 19: how many has each?

18. Thomas and James each had the same number of cents, when Thomas found 8 more; they then had together 32 cents: how many had each?

19. Thomas and William each bought the same number of peaches; after Thomas ate 4, and William 6, they both together had 20 left: how many peaches had each remaining?

20. Mary bought twice as many cherries as Sarah; and, after Mary ate 7, and Sarah 5, they had only 24 left: how many had each left?

21. If 5 is added to three times a certain number, the sum will be 50: what is the number?

22. If 3/4 of a certain number be increased by 10, the sum will be 31: what is the number?

23. If 4/5 of a number be diminished by 7, the remainder will be 21: what is the number?

24. James is 4 years older than Henry, and Henry is 3 years younger than Oliver; the sum of all their ages is 37 years: what is the age of each?

25. Mary has 8 cts. more than Jane, and Sarah 3 less than Mary; they all have 43 ct.: how many has each?

26. The sum of the ages of Mary and Frank is 42 years; Mary is twice as old as Frank, less 3 years: what is the age of each?

27. I bought a watch, a chain, and a ring, for $62; the chain cost $5 less than the ring, and the watch $12 more than the chain: what did I pay for each?

28. Thirty cents are 6 cents less than 1/2 of 4/7 of my money: how much have I?

29. John has twice as much money as James, + $3; Frank has as much as John and James, + $7; together they have $55: how much has each?

30. Joseph has 3 times as much money as Thomas – $2; Paul has twice as much as Joseph and Thomas together – $20; together they have $22: how much has each?

31. A horse, buggy, and harness cost $225; the horse cost $50 more than the harness, and the buggy $25 more than the horse and harness together: what was the cost of each?

LESSON 140

Name _____

INTELLECTUAL LESSON 57 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. Divide 15 into two parts, so that the less part may be 2/3 of the greater.

2. Thomas and John have $60 to pay; John has 3/7 as much to pay as Thomas: what must each pay?

3. I had 56 mi. to travel in 2 da.; the second da. I went 3/4 as far as the first: how far did I travel each da.?

4. Divide 100 into two such parts, that 5/7 of the first less 8 will equal the second.

5. Divide the number 45 into three such parts, that the second shall be 1/2, and the third 3/4 of the first part.

6. A, B, and C, together have 40 ct.; B has 3/5 as many as A, and C 2/3 as many as B: how many cents has each?

7. A tree 70 ft. long was broken into 3 pieces; the middle part was 5/6 of the top part; the lower part was 3/5 of the middle part: what was the length of each?

8. I bought a hat, coat, and vest, for $34; the hat cost 2/5 of the price of the coat, and the vest 3/4 the price of the hat: what was the cost of each?

9. Divide 38 ct. between A and B, so that 2/3 of A's share may be equal to 3/5 of B's.

10. In a field containing 55 sheep and cows, 1/2 of the = 2/7 of the sheep: how many are there of each?

11. The sum of two numbers is 60; and 1/3 of the less equals 2/9 of the greater: what are the numbers?

12. One-fourth of Mary's age = 1/3 of Sarah's, and the sum of their ages is 14 years: what is the age of each?

13. Divide the number 51 into two such parts, that 2/3 of the first will equal 3/4 of the second.

14. In an orchard of 65 apple and peach trees, 2/3 of the apple trees = 4/7 of the peach trees: how many are there of each?

15. From C to D is 66 mi.; A left C at the same time B left D; when they met, 2/3 of the distance A had traveled = 5/9 of the distance B had traveled: how much farther did B travel than A?

16. In an orchard of apple, plum, and cherry trees, 69 in all, the plum trees — 1/3 of the apple trees, and the cherry trees = 1/2 of the apple trees + 1/4 of the plum trees : how many trees arc there of each kind ?

17. The age of Jane is 7/8 of the age of Sarah, and 4/9 of both their ages is 5/8 of the age of Mary; which is 12 years: what are the ages of Jane and Sarah ?

18. How many times 3/11 of 44 is twice that number of which 4/5 of 30 is 4/9?

19. John's money is 3/5 of Charles's; and 3/4 of John's + $33 = Charles's: how much has each?

20. On a farm there are 104 animals – hogs, sheep, and cows; there are 2/3 as many sheep as hogs, and 3/4 as many cows as sheep: how many are there of each?

21. The time past noon is equal to half the time till midnight: what o'clock is it?

22. The time elapsed since noon is 3/5 of the time to midnight: what is the hour?

23. The time past noon, + 3 hr., is equal to 1/2 of the time to midnight: what is the hour?

24. What is the hour in the afternoon, when the time past noon is equal to 1/5 of the time past midnight?

25. What is the hour in the afternoon, when the time past noon is 1/4 of the time past midnight?

26. What is the hour of the day, when 1/2 of the time past noon is 1/20 of the time past midnight?

LESSON 141

Name _____

INTELLECTUAL LESSON 58 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. What number is that to which, if its half be added, the sum will be 15?

2. What number is that to which if its 2/3 be added, the sum will be 20?

3. If to Mary's age its 2/5 be added, the sum will be 21 years: what is her age?

4. What number is that which being doubled, and increased by its 3/5, the sum will be 52?

5. What number is that which being doubled, and diminished by its 4/7, the remainder will be 40?

6. What number is that which being trebled, and diminished by its 3/5, the remainder will be 48?

7. If to David's age you add its 1/2 and its 2/3, the sum will be 26: what is his age?

8. If to Sarah's ago you add its 1/3, its 1/4, and 10 years, the sum will be twice her age: how old is she?

9. Thomas spent 2/5 of his money, and had 30 cents left: how much had he at first?

10. If to a certain number you add its 1/2, and its 3/5 + 27, the number will be trebled: what is the number?

11. A father is 40 years older than his son; the son's age is 3/11 of the father's age: what is the age of each?

12. If to Susan's age you add its 4/5 + 18 years, the sum will be 3 times her age: how old is she?

13. A piece of flannel, having lost 2/9 of its length by shrinkage, measured 28 yd.: what was its length?

14. The distance from A to B is 1/2 the distance from C to D, and 2/3 of the distance from A to B, + 20 mi., = the distance from C to D: what is the distance from A to B, and from C to D?

15. My age plus its 1/3 and its 1/5 = 2/3 of my father's age. My father's age is 69 years; what is my age?

LESSON 142

Name _____

INTELLECTUAL LESSON 59 Date _____

OBJECTIVE(S)

- Check understanding of previous lessons.

Directions: Complete the following review problems. Review any previous lessons, as necessary.

1. If A can do a piece of work in 2 days, what part of it can he do in 1 day?

2. A can drink a keg of cider in 10 days: what part of it can he drink in 1 day?

3. B can do a piece of work in 1/2 a day: how many times the work can he do in 1 day?

4. C can mow a certain lot in 3/8 of a day: how many such lots can he mow in a day?

5. A can mow a certain field in 2 1/2 days: what part of it can he mow in 1 day?

6. B can dig a trench in 3 1/2 days: what part of it can he dig in 1 day?

7. C can walk from Cincinnati to Dayton in 3 1/3 days: what part of the distance can he walk in 2 days?

8. A can do 1/2 of a piece of work in 1 day, and B 1/4 of it: what part of the work can both do in a day?

9. A can do 1/2, B 1/4, and C 1/5 of a piece of work in 1 day: what part of it can they all do in a day?

10. If A can do a piece of work in 2 days, and B in 3 days: in what time can they both together do it?

11. A can dig a trench in 6 days, and B in 12 days: in what time can they both together do it?

12. C alone can do a piece of work in 5 days, and B in 7 days: in what time can both do it?

13. A can do a piece of work in 2 days, B in 3 days, and C in 6 days: in what time can all three do it?

14. A and B mow a field in 4 days; B can mow it alone in 12 days: in what time can A mow it?

15. A man and his wife can drink a keg of beer in 12 days; when the man is away, it lasts the woman 30 days: in what time can the man drink it alone?

16. Three men, A, B, and C, can together reap a field of wheat in 4 days; A can reap it alone in 8 days, and B in 12 days: in what time can C reap it?

17. A can do 1/2 a piece of work in a day, and B 1/3 of it in a day: how long will it take both to do it?

18. A can dig a cellar alone in 2 1/2 days, and B in 3 1/3 days: in what time can both together dig it?

19. C can reap a field of wheat in 5 days, and D in 3 1/3 days: in what time can both reap it?

LESSON 143

Name _____

INTELLECTUAL LESSON 60 Date _____

OBJECTIVE(S)

- Solve problems involving ratios.

Directions: Complete the following ratio problems.

1. What part of 8 is:
   a. 2?

   b. 4?

   c. 1?

2. How many times does 10 contain 2? 2 is what part of 10?

3. What is the ratio of 12 to 2?

4. How many times does 18 contain 9? What is the ratio of 18 to 9?

5. What is the ratio of:
   a. 36 to 12?

   b. 45 to 9?

   c. 66 to 11?

d. 52 to 13?

e. 1 to 2?

f. 3 to 4?

6. What is the ratio of:

a. 2 1/2 to 5?

b. 6 1/4 to 12 1/2?

c. 1/4 to 1/2?

d. 2/3 to 5/6?

e. 2/3 to 4/5?

f. 1/2 to 1/3?

7. If the ratio of two numbers is 5, and 6 is the less number, what is the greater?

8. The ratio of 21 to 7 is equal to the ratio of 36 to some number: what is the number?

9. Five less than the ratio of 20 to 2, is 1/4 of the ratio of 40 to what number?

10. The ratio of 18 to 2, plus 3, is 7 less than the ratio of 38 to what number?

11. The ratio of 27 to 9, increased by 5, is equal to the ratio of 20 to what number?

12. Divide 25 ct. between George and John, so that their shares are in the ratio of 3 to 2.

13. Divide the number 48 into two parts that shall be in the ratio of 5 to 7.

14. Divide 20 apples between A and B, so that A may get 2 as often as B gets 3.

15. Divide 28 cents between John and James, so that John gets 3 as often as James gets 4.

16. In an orchard of 96 trees there are 5 apple trees to 3 peach trees: how many of each kind?

17. A school of 35 pupils has 2 boys to 3 girls: how many of each in the school?

18. What number is that which being added to 3 times itself will make 48?

19. Mary has 25 yd. of ribbon; she wishes to divide it into two parts, so that one shall be 4 times the length of the other: what will be the length of each part?

20. Divide 28 into two parts, so that one will be to the other as 3 to 4.

21. A and B hired a pasture for $45: A pastured 4 cows, and B 5 cows: what should each pay?

22. Two men paid $3 for 7 1/2 dozen oysters: the first paid $2, and the second, $1: how many dozen oysters should each have?

23. A and B bought a horse for $40; A paid $25, and B the rest: they sold him for $56: what should each receive?

24. C and D sold a horse for $30 less than it cost; C's share was to D's as 3 to 2: what was each one's loss?

LESSON 144

Name _____

INTELLECTUAL LESSON 61 Date _____

OBJECTIVE(S)

- Solve problems involving ratios.

Directions: Complete the following ratio problems.

1. Divide the number 22 into two parts that shall be to each other as 2 1/3 to 3.

2. Divide 16 apples between Henry and Oliver, so that their shares shall be in the ratio of 1 1/2 to 2 1/2.

3. Divide 14 ct. between A and B, so that B may have 1 1/3 times as many as A.

4. John and James have together 33 marbles; James has 1 3/4 times as many as John: how many has each?

5. Two boys bought a silver watch for $7: the first paid $2 1/2, the second, $4 1/2, and they sold it for $28: what was each one's share?

6. William's age is 1 2/3 times Frank's age; the sum of their ages is 32 yr.: what is the age of each?

7. A basket contains 30 apples: the number of sound ones is 2 1/3 times the number not sound: how many are there of each?

8. Two men built 27 ft. of wall: how much did each build, if one built 4/5 as much as the other?

9. Divide the number 60 into 3 parts that shall be to each other as 3, 4, and 5.

10. Divide the number 70 into four parts that shall be to each other as 1, 2, 3, and 4.

11. Divide 39 into three parts that shall be to each other as 1/2, 1/3, and 1/4.

12. William had 3 ct., Thomas 4 ct., and John 5 ct.; they bought 36 peaches: what was the share of each?

13. A boat worth $864, of which 1/8 belonged to A, 1/4 to B, and the rest to C, was lost: what loss did each sustain, it having been insured for $500?

14. A, B, and C have $42; B has 1/2 as much as A, and C 1/2 as much as B : how much has each?

15. Divide 45 ct. among A, B, and C, so that A may get 4 ct. as often as B gets 3 ct. and C 2 ct.

16. On a farm there are 60 animals—horses, cows, and sheep; for each horse there are 3 cows, and for each cow there are 2 sheep: how many animals of each kind?

17. Divide 42 plums among A, B, and C, so that B may get twice, and C 3 times as many as A.

18. Divide 35 cherries among Emma, Agnes, and Sarah, so that Agnes shall have twice as many as Emma, and Sarah twice as many as Agnes.

LESSON 145

Name _____

INTELLECTUAL LESSON 62 Date _____

OBJECTIVE(S)

- Solve problems involving ratios.

Directions: Complete the following ratio problems.

1. If 5 men can do a piece of work in 18 da., how many men can do it in 9 da.?

2. If 8 men can do a piece of work in 15 da., how many men can do it in 12 da.?

3. If 8 men can do a piece of work in 5 da., in what time can 5 men do it.?

4. If 9 pipes fill a cistern in 2£ hr., in what time will 5 such pipes fill it?

5. A man, failing in business, paid 80 ct. on each dollar of his indebtedness: what did I receive, if he owed me $60?

6. A grocer, failing, pays only 15 ct. on the dollar: what will a creditor receive to whom he owes $80?

7. A trader, failing, pays 60 ct. on the dollar: what will a creditor receive to whom he owes $80?

8. If a certain quantity of flour affords 8 five-cent loaves, how many ten-cent loaves will it furnish?

9. If a certain quantity of flour affords 6 five-cent loaves, how many three-cent loaves will it furnish?

10. If a sack of flour makes 20 three-cent loaves, how many four-cent loaves will it make? How many five-cent loaves?

11. If a loaf weigh 8 oz. when flour is $3 a barrel, what should it weigh when flour is $4 a bbl.? $5 a bbl.?

12. A loaf weighs 10 oz. when flour is $6 a bbl.: what should it weigh when flour is $5 a bbl.?

13. If a loaf weigh 7 oz. when flour is $5 1/3 a bbl.: what ought it to weigh when flour is $4 2/3 a bbl.?

14. If 5 men can do a piece of work in a certain time, how many can do a piece twice as large in 1/5 of the time?

15. If 6 men can do a piece of work in 5 days, in what time can they do it, if they receive the assistance of 3 additional men when the work is half completed?

16. If 7 men can do a piece of work in 4 days, in what time can it be done, if 3 of the men leave when the work is half completed?

17. If the wages of 3 men for 5 days is $30, what will be the wages of 4 men for 7 da.?

18. If 6 persons spend $36 in 8 days, how much, at that rate, would 5 persons spend in 12 da.?

19. If 3 men can build 12 rd. of wall in 8 da., how f many rd. can 5 men build in 3 da.?

20. If 6 horses eat 36 bu. of oats in 10 days, how many bu. will 5 horses eat in 9 da.?

21. If 5 oxen eat 2 A. of grass in 6 days, in how many days will 12 oxen eat 8 A., the grass growing uniformly?

22. If a family of 8 persons spend $400 in 5 mon., how much would maintain them 8 mon., if 3 more persons were added?

23. If 10 oxen can be kept on 5 A. for 3 mon., how many sheep can be kept on 15 A. for 5 mon., if 7 sheep eat as much as 1 ox?

LESSON 146

Name _____

INTELLECTUAL LESSON 63 Date _____

OBJECTIVE(S)

- Solve problems involving ratios.

Directions: Complete the following ratio problems.

1. A and B rent a pasture for $25: A puts in 27 oxen, and B 180 sheep: what should each pay, supposing an ox to eat as much as 10 sheep?

2. A and B rent a pasture for $60: A puts in 14 horses, and B, 15 cows: what should each pay, if 2 horses eat as much as 3 cows?

3. A and B rent a pasture for $72: A puts in 8 horses, B 15 oxen and 120 sheep: what should each pay, if a horse eat as much as 20 sheep, and 2 horses as much as 3 oxen?

4. A and B rent a pasture for $35: A puts in 4 horses 2 wk.; B, 3 horses 4 wk.: what ought each to pay?

5. C and D join their stocks in trade; C puts in $50 for 4 mon., and D $60 for 5 mon.: they gain $45: what is the share of each?

6. Two masons, A and B, built a wall for $81; A sent 3 men for 4 da., and B 5 men for 3 da.: what ought each to receive?

7. A and B traded in company; A put in $2 as often as B put in $3; A's money was employed 5 mon., and B's 4 mon.: they gained $5: what was each man's share?

8. E and F rented a field for $27; E put in 4 horses for 5 mon., and F 10 cows for 6 mon.: what ought each to pay, if 2 horses eat as much as 3 cows?

9. M and N enter into partnership for one year. M puts in $600, and N, $900; they gain $300: after paying $150 expenses, what is each one's share of the gain?

10. At the beginning of the year, C went into business with a capital of $600: four months after, D formed a partnership with C, and put in $600: the gain for the year was $250: what was each one's share?

11. B and F entered into partnership for a year; E's capital was $1000, and F's three times as much; at the end of 8 months, F drew out $1000; the gain for the year was $770: what was each one's share?

12. The capital of a firm, consisting of A and B, was $2400; the gain for the year was $240, A's share being $20 more than B's: how much capital did each furnish?

13. The capital of a firm, consisting of C and D, was $980; C's capital was used 8 months, and D's 6 months, when the gain was equally divided: how much capital did each invest?

14. In a partnership, A's gain was $70, and B's $80. A's capital was employed 10 months, and B's 8 months: their joint capital was $1700: what was the original investment of each?

15. The gain of a firm, consisting of E and F, was $840: E's stock was to Fs as 2 to 3, and E's was in use 10 months, F's 12 months: what was each one's share of the gain?

LESSON 147

Name _____

PRACTICAL ARTICLE 155 Date _____

OBJECTIVE(S)

- Learn basic units of the metric systems.

Directions: Fill in the blanks to complete the sentences involving the Metric System.

1. _____ is the unit of length in the Metric System.
2. _____ is the unit of land in the Metric System.
3. _____ is the unit of capacity in the Metric System.
4. _____ is the unit of weight in the Metric System.
5. _____ is the Metric System prefix meaning (.1).
6. _____ is the Metric System prefix meaning (.01).
7. _____ is the Metric System prefix meaning (.001).
8. _____ is the Metric System prefix meaning (10).
9. _____ is the Metric System prefix meaning (100).
10. _____ is the Metric System prefix meaning (1000).
11. _____ is the Metric System prefix meaning (10000).

Directions: Circle either *left* or *right* in the following sentences regarding the Metric System.

12. Multiplying a number by 100 moves the decimal place 2 places to the **left / right**.
13. Dividing a number by 1000 moves the decimal place 3 places to the **left/right**.

LESSON 148

Name _____

PRACTICAL ARTICLE 156 Date _____

OBJECTIVE(S)

- Complete reduction problems involving the Metric System.

Directions: Children complete the following reduction problems involving the Metric System.

TABLE.

10 millimeters,	marked mm.,	are 1 centimeter,	marked	cm.
10 centimeters	"	1 decimeter,	"	dm.
10 decimeters	"	1 meter,	"	m.
10 meters	"	1 dekameter,	"	Dm.
10 dekameters	"	1 hektometer	"	Hm.
10 hektometers	"	1 kilometer,	"	Km.
10 kilometers	"	1 myriameter,	"	Mm.

1. Reduce 5.638 m. to centimeters. _____
2. Reduce 3642.9 m. to kilometers. _____
3. Reduce 4.27 Dm. to centimeters. _____
4. Reduce 5.6 dm. to hektometers. _____
5. Reduce 30.75 m. to centimeters. _____
6. Reduce 4.5 Km. to meters. _____
7. Reduce 75 mm. to meters. _____
8. Reduce .025 Dm. to decimeters. _____
9. Reduce 36.5 dm. to dekameters. _____
10. Reduce .4875 Km. to centimeters. _____

LESSON 149

Name _____

TEST ARTICLE 156 Date _____

OBJECTIVE(S)

- Solve problems involving Metric System measures of length.

Directions: Complete the following problems involving Metric System measures of length. Reduce the following:

1. 394.5 Hm. to dm. _____
2. 93.64 m. to kilometers. _____
3. 1234.56 Dm. to Mm. _____
4. 987.65 Km. to Dm. _____
5. .34 m. to myriameters. _____
6. 74.6 Dm. to cm. _____
7. 83.7 Hm. to Mm. _____
8. .37 Mm. to meters. _____
9. 4600 Km. to dm. _____
10. 58000 cm. to Hm. _____
11. 374.5 Mm. to cm. _____
12. 67.25 Dm. to Km. _____
13. 8936.4 cm. to Dm. _____
14. .456 Km. to Hm. _____

LESSON 150

Name _____

PRACTICAL ARTICLE 157 Date _____

OBJECTIVE(S)

- Solve problems involving Metric System measures of land.

Directions: Complete the following problems involving Metric System measures of land.

TABLE.

100 centars, marked ca., are 1 ar, marked a.
100 ars " 1 hektar, " Ha.

Reduce the following:

1. Reduce 2.625 a. to centars. _____

2. Reduce 397.8 a. to hektars. _____

3. Reduce 2500 ca. to hektars. _____

4. Reduce 3.8 a. to square meters. _____

LESSON 151

Name _____

TEST ARTICLE 157 Date _____

OBJECTIVE(S)

- Solve problems involving Metric System measures of land.

Directions: Complete the following problems involving Metric System measures of land. Reduce the following:

1. 374680 m^2 to hektars. _____
2. 493.2 A. to centars. _____
3. 387.43 ca. to ars. _____
4. 387.43 m^2 to ars. _____
5. 43.875 A. to m^2. _____
6. .457 ca. to hektars. _____
7. 8973.4 m^2 to hektars. _____
8. 5839 A. to m^2. _____
9. 3843 ca. to hektars. _____
10. 3970 A. to centars. _____

LESSON 152

Name _____

PRACTICAL ARTICLE 158 Date _____

OBJECTIVE(S)

Solve conversion problems involving Metric System measures of capacity.

Directions: Complete the following problems involving Metric System measures of capacity.

TABLE.

10 centiliters, marked cl.,	are	1 deciliter,	marked	dl.
10 deciliters	"	1 liter,	"	l.
10 liters	"	1 dekaliter,	"	Dl.
10 dekaliters	"	1 hektoliter,	"	Hl.

1. Reduce 2.456 l. to centiliters. _____

2. Reduce 873.5 l. to hektoliters. _____

3. Reduce 1.83 Hl. to deciliters. _____

4. Reduce 2400 cl. to dekaliters. _____

5. Reduce 1400 1. to cubic meters. _____

LESSON 153

Name _____

TEST ARTICLE 158 Date _____

OBJECTIVE(S)

- Solve conversion problems involving Metric System measures of capacity.

Directions: Complete the following problems involving Metric System measures of capacity. Reduce the following:

1. 4800 cl. to liters. _____

2. 39.5 Dl. to centiliters. _____

3. 493.7 dl. to Hl. _____

4. 58.39 Hl. to centiliters. _____

5. .457 Dl. to liters. _____

6. 6.789 1. to centiliters. _____

7. 34.692 Hl. to Dl. _____

8. 42.789 dl. to liters. _____

9. 325.84 1. to hektoliters. _____

10. 4.7 dl. to dekaliters. _____

11. 3800 Hl. to deciliters. _____

12. 29.7 1. to dekaliters. _____

13. 468.3 cl. to hektoliters. _____

14. 38700 Dl. to deciliters. _____

15. 49 m^3 to liters. _____

16. 37282 cl to m^3. _____

17. 678 1. to cubic meters. _____

18. .0303 m^3 to deciliters. _____

LESSON 154

Name _____

PRACTICAL ARTICLE 159

Date _____

OBJECTIVE(S)

- Solve conversion problems involving Metric Weights.

Directions: Complete the following problems involving Metric Weights.

TABLE.

10 milligrams,	marked	mg.,	are 1 centigram,	marked	cg.
10 centigrams		"	1 decigram,	"	dg.
10 decigrams		"	1 **gram,**	"	g.
10 grams		"	1 dekagram,	"	Dg.
10 dekagrams		"	1 hektogram,	"	Hg.
10 hektograms		"	1 kilogram,	"	Kg.
10 kilograms		"	1 myriagram,	"	Mg.
10 myriagrams		"	1 quintal,	"	Q.
10 quintals, or 1000 kilograms,		"	1 metric ton,	"	M.T.

1. Reduce 1428.06 g. to kilograms. _____
2. Reduce .28 Kg. to grams. _____
3. Reduce 1713.5 Kg. to metric tons. _____
4. Reduce .00654 Hg. to centigrams. _____
5. Reduce 192.7 dg. to dekagrams. _____

LESSON 155

Name _____

TEST ARTICLE 159 Date _____

OBJECTIVE(S)

- Solve conversion problems involving Metric Weights.

Directions: Complete the following problems involving Metric Weights. Reduce the following:

1. 6.5 Mg. to M. T. _____
2. 489.31 Dg. to mg. _____
3. .04653 Q. to Dg. _____
4. 654.3 Hg. to quintals. _____
5. 87 M. T. to kilograms. _____
6. .937 mg. to grams. _____
7. 123.456 Hg. to dg. _____
8. 873.4 dg. to Dg. _____
9. 88.736 Mg. to cg. _____
10. .0086 g. to quintals. _____

11. .0765 Kg. to M. T. _____

12. 3945 cg. to Hg. _____

13. 3.894 M. T. to grams. _____

14. 87300 Kg. to mg. _____

15. 89900 Dg. to Mg. _____

16. .00489 Q. to dg. _____

17. 4000 G. to Mg. _____

18. 12000000 mg. to Kg. _____

19. 9876541 dg. to quintals. _____

20. 34.56 Kg. to grams. _____

21. 48004800 cg. to Hg. _____

22. .09083 M. T. to mg. _____

LESSON 156

Name _____

PRACTICAL ARTICLE 160

Date _____

OBJECTIVE(S)

- Solve problems involving the Metric System.

Directions: Complete the following problems involving the Metric System.

DENOMINATION.	LEGAL VALUE.
Meter.	39.37 inches.
Kilometer.	.62137 mile.
Square Meter.	1.196 sq. yards.
Ar.	119.6 sq. yards.
Hectar.	2.471 acres.
Cubic Meter.	1.308 cu. yards.
Ster.	.2759 cord.
Liter.	1.0567 quarts.
Hektoliter.	2.8375 bushels.
Gram.	15.432 gr. T.
Kilogram.	2.2046 lb. Av.
Tonneau.	2204.6 lb. Av.

1. How many yards, feet, etc., in 4 m.?

2. What is the value of 36 lb. in kilograms?

3. What is the value of 20 Km.?

4. How many hektars in 160 acres?

5. What is the value of 49 m.?

6. What is the value of 15 g.?

7. How many hektoliters in 42 bu.?

8. How many cords in 500 sters?

9. How many square yards in a roll of paper 9 m. long and .5 m. wide?

10. 32 l. are how many gallons?

LESSON 157

Name _____

TEST ARTICLE 160 Date _____

OBJECTIVE(S)

- Solve problems involving the Metric System.

Directions: Complete the following problems involving the Metric System. Find the value of:

1. 40 meters. _____
2. 50 hektars. _____
3. 375 kilograms. _____
4. .6375 kilometers. _____
5. 13 tonneaux. _____
6. 93.75 sters. _____
7. 875 grams. _____
8. 500 cubic meters. _____
9. 625 square meters. _____
10. 37.5 ars. _____

Directions: Reduce:

11. 45 hektoliters to bu. _____

12. 100 inches to meters. _____

13. 100 mi. to kilometers. _____

14. 100 sq. yd. to m^2. _____

15. 100 acres to hektars. _____

16. 100 cu. yd. to m^3. _____

17. 48 sq. rd. to ars. _____

18. 18 T. to metric tons. _____

19. 454 bu. to hektoliters. _____

20. 66 gal. to liters. _____

21. 1 lb. 4oz. 1 pwt. 12 gr. to grams. _____

22. 3000 sq. ft. to m^2. _____

23. 56 bu. 3 pk. to Hl. _____

24. 2 lb 8 ʒ 1 ʒ 12 gr. to the metric system. _____

LESSON 158

Name _____

PRACTICAL ARTICLE 161 Date _____

OBJECTIVE(S)

- Review solving problems involving the Metric System.

Directions: Complete review problems involving the Metric System.

1. What is the sum of 127 dl., 4.87 1., 1563 cl., and 234.5 dl.?

2. What will be the cost of 45 Ha. of land, at $3.32 an ar?

3. A merchant paid $457.92 for cloth, at $3 a meter: how many meters did he buy?

4. A block of marble .72 m. long, .48 m. wide, and .5 m. thick cost $.864: what is the cost of the marble per cubic meter?

5. A manufacturer bought 380 sters of wood for $454.10: how much was that a ster?

6. How many hektoliters of oats in 4685 sacks, each containing 1.6 Hl.?

7. I bought 346.75 Kg. of coffee for $194.18: what did I pay per kilogram?

8. The nickel 5-cent coin weighs 5 g. and is 2 cm. in diameter: what would be the weight of enough of these coins laid in a row, to make a meter in length?

9. How much lining 1.85 m. wide will it take for a garment made of 6.5 m. of cloth 1.25 m. wide?

10. How many kilometers from Cincinnati to Dayton, the distance being 60 miles.

11. A map is 29 mm. long and 22.4 mm. wide: what space does it cover?

12. The distance between two. Towns is 13.24037 Km.: how many steps of .715 m. each, must I take to walk that distance?

LESSON 159

Name _____

TEST ARTICLE 161

Date _____

OBJECTIVE(S)

- Review solving problems involving the Metric System.

Directions: Complete review problems involving the Metric System.

1. What cost 475 kilos of iron, at 4 ct. a pound?

2. What cost 6 hektometers of fence, at 15 ct. a foot?

3. What cost 40 sters of wood, at $6.25 per cord?

4. What cost 327 cubic meters of stone-work, at $5.30 per cubic yard?

5. Find the weight of a stone 4 m. long, 4 dm. wide, and 8 cm. thick, if a cubic meter weighs 3 cwt.

6. What cost a field 300 meters square, at $30 per ar?

7. What cost a pile of wood 8 m. long, 3 m. wide, and 1.5 m. high, at $1.30 per ster?

8. What must be paid for 17 quintals of wheat, at 5 ct. per kilo?

9. A field is 52 yd. wide and 92 yd. long; what is it worth, at $.35 per square meter?

10. A pile of stone is 109 ft. long, 36 ft. wide, and 9 ft. high; what is it worth at $3.80 per cubic meter?

11. Find the cost of 64.3 lb. of gold ore, at 45 ct. per grain.

12. Find the cost of a gold chain weighing 1929 grains, at 60 ct. a gram.

13. What would be the cost of 2 T. 15 cwt. 11 lb. 8 oz. of coal, at $5.60 per metric ton?

14. How long will it take a man to walk 31.0685 mi. if he can walk 6 kilometers in an hour?

LESSON 160

Name _____

PRACTICAL ARTICLE 162 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Express the following as common fractions and as decimals:

1. 10% _____ _____
2. 15% _____ _____
3. 20% _____ _____
4. 30% _____ _____
5. 50% _____ _____
6. 2 1/2% _____ _____
7. 6 1/4% _____ _____
8. 12 1/2% _____ _____
9. 18 3/4% _____ _____
10. 37 1/2% _____ _____
11. 56 14% _____ _____
12. 87 1/2% _____ _____

How many per cent are equivalent to the following fractions?

1. 2/25 _____
2. 3/25 _____
3. 4/25 _____
4. 1/30 _____
5. 1/12 _____
6. 1/4 _____
7. 2/5 _____
8. 3/4 _____
9. 1/3 _____
10. 7/16 _____

LESSON 161

Name _____

PRACTICAL ARTICLE 163-164 Date _____

OBJECTIVE(S)

- Define *base*, *rate*, and *percentage*
- Given the base and rate, find the percentage

Directions: Calculate the percentage, given the base and rate.

1. What is 25% of 32?

2. What is 7% of 162?

3. What is 1% of 278?

4. What is 2% of 180?

5. What is 3% of 97?

6. What is 3 1/3% of 165?

7. What is 3 3/4% of 240?

8. What is 4% of 140?

9. What is 5% of 118?

10. What is 5 1/3% of 150?

11. What is 6% of 250?

12. What is 6 2/3% of 450?

13. What is 8% of 11?

14. What is 8 1/3% of 384?

15. What is 10% of 57?

16. What is 12 1/2% of 292?

17. What is 15% of 95?

18. What is 17% of 53.4?

19. What is 18 3/4% of 11.2?

20. What in 20% of 9.85?

21. What is 25% of 43?

22. What is 33 1/3% of 6.93?

23. What is 45% of 5.7?

24. What is 50% of 38.75?

25. What is 1/2% of 456?

26. What is 3/8% of 464?

27. What is 7/16% of 144?

28. What is 125% of 36?

29. What is 208% of 650?

30. What is 450% of 12?

31. What is 1000% of 24.75?

LESSON 162

Name _____

TEST ARTICLE 164 Date _____

OBJECTIVE(S)

- Given the base and rate, find the percentage

Directions: Calculate the percentage, given the base and rate.

1. 28% of 925.

2. 25% of 624.

3. 23% of 900.

4. 13 1/3% of 744.

5. 16 2/3% of 390.

6. 37 1/2% of 8.8.

7. 2 1/2% of 290.

8. 8/10% of 70.

9. 14 2/7% of 1393.

10. 56% of 750.

11. 5.6% of 750.

12. 1/9% of 467.

13. 800% of 800.

14. 900% of 1/900.

15. 22% of 1800 bu. corn?

16. 85% of 7 da.?

17. 1/10% of $480?

18. 500% of 71 A.?

19. 53% of 3 T.?

20. 20% of 19 gal. 1 qt. 1 pt.?

21. 100% of 3 bu. 2 pk.?

22. 66 2/3% of 87 gal.?

23. 1/2% of 1/2?

24. 2 2/3% of 2 1/2?

25. 16 2/3% of 16 2/3?

26. 77% of 187.05?

LESSON 163

Name _____

PRACTICAL ARTICLE 165 Date _____

OBJECTIVE(S)

- Given the base and percentage, find the rate

Directions: Calculate the rate, given the base and percentage.

1. What percent of 8 is 2?

2. What percent of 56 is 3.5?

3. What percent of 15 is 3?

4. What percent of 50 is 6?

5. What percent of 75 is 4.5?

6. What percent of 9 is 3?

7. What percent of 25 is .25?

8. What percent of 142.6 is 7.13?

9. What percent of 9 is 9?

10. What percent of 9 is 13.5?

11. What percent of 243 is 8.505?

12. What percent of 2 is .002?

13. What percent of 3532 is 13.245?

14. What percent of 4/5 is 3/25?

15. What percent of 2/3 is 2/15?

16. What percent of 16/21 is 2/7?

17. What percent of 11 2/3 is 5 1/4?

18. What percent of 57 7/9 is 10 5/6?

LESSON 164

Name _____

TEST ARTICLE 165 Date _____

OBJECTIVE(S)

- Given the base and percentage, find the rate

Directions: Calculate the rate, given the base and percentage.

1. What percent of 275 is 33?

2. What percent of 48 is 36?

3. What percent of 60 is 10.2?

4. What percent of 800 is 600?

5. What percent of 666 is 499.5?

6. What percent of 350 is 56?

7. What percent of 75 bu. is 33 bu.?

8. What percent of 48 is 96?

9. What percent of 56 is 560?

10. 172£ is what percent of 230?

11. 187.5 is what percent of 150?

12. .5 is what percent of 250?

13. 4 is what percent of 17 7/9?

14. 2.3 is what percent of 18 2/5?

15. .014 is what percent of 70?

16. 29 1/5 is what percent of 80?

17. 1 bu. 2 pk. is what percent of 3 bu. 3 pk.?

18. 6 gal. 3 qt. is what percent of 4 gal. 2 qt.?

19. What percent of 7/20 is 21/40?

20. What percent of 1 wk. is 4 da. 4 hr. 48 min.?

LESSON 165

Name _____

PRACTICAL ARTICLE 166 Date _____

OBJECTIVE(S)

- Given the rate and percentage, find the base

Directions: Calculate the base, given the rate and percentage.

1. 15 is 25% of what number?

2. 4.93 is 17% of what number?

3. 60 is 20% of what number?

4. 90 is 75% of what number?

5. 85 is 125% of what number?

6. 7.13 is 23% of what number?

7. 20.23 is 34% of what number?

8. 23.5 is 47% of what number?

9. 45 is 1 1/2% of what number?

10. 2.25 is 12 1/2% of what number?

11. 3/4 is 250% of what number?

12. 14 2/7 is 16 2/3% of what number?

LESSON 166

Name _____

TEST ARTICLE 166 Date _____

OBJECTIVE(S)

- Given the rate and percentage, find the base

Directions: Calculate the base, given the rate and percentage.

1. 4.2 is 6% of what number?

2. 153 is 68% of what number?

3. 315 is 1/2% of what number?

4. 6 is 3 3/7% of what number?

5. 14 2/5 is 4 1/2% of what number?

6. 7 5/7 is 150% of what number?

7. 43 1/3 is 11 1/9% of what number?

8. 35 is 46 2/3% of what number?

9. 1 1/3 is 1/20% of what number?

10. 175 of 1000% of what number?

11. 45 3/8 is 18 3/4% of what number?

12. 3 bu. 3 pk. is 24% of what quantity?

13. 5 da. 5 hr. is 150% of what quantity?

14. 18 gal. is 96% of what quantity?

15. 18 T. 9 cwt. is 22 1/2% of what quantity?

16. A. 40 sq. rd. is 40% of what quantity?

LESSON 167

Name _____

PRACTICAL ARTICLE 167 Date _____

OBJECTIVE(S)

- Given the rate and the sum or difference of the base and percentage, find the base

Directions: Calculate the base, given the rate and the sum or difference of the base and percentage.

1. A number, plus 35% of itself, equals 675: what is the number?

2. A number, minus 5% of itself, equals 57: what is the number?

3. 721 is 3% greater than a certain number; what is the number?

4. 68 is 66% less than what number?

5. What number, increased by 25% of itself, amounts to 2125?

6. What number, diminished by 6% of itself, is equal to 7.52?

7. 8250 is 37 1/2% greater than what number?

8. What fraction, less 10% of itself, equals 3/8?

9. 6.6 is 20% more than what number?

LESSON 168

Name _____

TEST ARTICLE 167 Date _____

OBJECTIVE(S)

- Given the rate and the sum or difference of the base and percentage, find the base

Directions: Calculate the base, given the rate and the sum or difference of the base and percentage.

1. What number, increased by 30% of itself, equals 1690?

2. What number, diminished by 80% of itself, would give 80?

3. 777 is 40% greater than what number?

4. 777 is 40% less than what number?

5. 60 is 60% less than what number?

6. 60 is 60% more than what number?

7. What fraction, less 23 1/3% of itself, would equal 23/40?

8. What number + 26% of itself, would equal 25 1/5?

9. What number, increased by 135% of itself, would give 15 2/3?

10. What number, diminished by 99 1/6% of itself, would leave 350?

11. What number, increased by 4/5% of itself, would give 56?

12. Find a number which, added to 18 3/4% of itself, will give 36.1.

LESSON 169

Name _____

PRACTICAL ARTICLE 168-169 Date _____

OBJECTIVE(S)

- Explore the formulas for the four cases of percentage
- Review problem solving involving percentages.

Directions: Solve the following miscellaneous problems involving percentages.

1. I had $800 in bank and drew out 36% of it: how much had I left?

2. A man had $300; after he had spent $225, what percent did he have left?

3. A merchant withdrew 40% of his deposits, leaving $3000 remaining in the bank: what amount did he with draw?

4. A grain dealer sold corn for 56 ct. a bushel, which was 40% more than it cost him: what was the cost per bushel?

5. A man sold a horse for $175, which was 12 1/2% less than the horse cost: what did the horse cost?

6. A grocer bought 4 sacks of coffee of 75 pounds each; 12 1/2% was lost by waste: what was the remainder worth at 35 cents per pound?

7. A man owed $500; he paid $425: what percent of the debt remains unpaid?

8. A speculator invested 75% of his estate in bonds, and the remainder of it, amounting to $5000, in real estate: how much did he invest in bonds?

9. A farmer owned a farm of 250 A. 86 sq. rd., which was 12 1/2% more than his neighbor owned: how much land did his neighbor own?

10. A flock of 160 sheep increased 35% in one year: how many were then in the flock?

11. A miller takes for toll 6 qt. from every 5 bu. of wheat ground: what percent does he take?

12. A farmer owning 45% of a tract of land, sold 540 acres, which was 60% of what he owned: how many acres were there in the tract?

13. When the gold dollar is worth 7% more than the greenback dollar, how much in gold are $371.29 in greenbacks worth

14. A's salary is $800 a year; he spends 18% of it for rent, 15% for clothing, 23% for provisions, and 12% for sundries: how much does he save annually?

15. A pupil at an examination answered 17 of the 20 questions correctly: what percent did he make?

16. 2 bu. 3 pk. are 33 1/3% of what number?

17. The number of pupils attending school on a certain day was 37; this was 7 1/2% less than the number enrolled: how many were enrolled?

18. A gold dollar weighs 25.8 grains Troy; 10% of it is alloy: how many grains of pure gold does it contain?

19. The five-cent piece weighs 5 grams, of which 1.25 G. are nickel and the remainder copper: what is the percent of copper?

20. A man sold a horse for $150, which was 25% more than it cost him: if he had sold the horse for $200, how many percent would it have been more than it cost him?

LESSON 170

Name _____

TEST ARTICLE 169 Date _____

OBJECTIVE(S)

- Review problem solving involving percentages.

Directions: Solve the following miscellaneous problems involving percentages.

1. Sold a house for $1805, which was 5% less than the cost; find the cost.

2. In a grade of 560 pupils, 532 passed at examination; what % of the grade passed?

3. A farmer's wife had 20 dozen chickens, and 6 2/3% of them died; how many died?

4. A man had 140 hogs, which he sold at $8 apiece, and spent 32 of the money for sheep, at $2.80; how many sheep did he buy?

5. Sold a house for $1840, which was 15% more than the cost; what was the cost?

6. In a school of 950 pupils, 52% were girls; how many boys were there?

7. After 22% of a polo had been broken off by the wind, it was 117 feet high; how high was it at first?

8. A's farm is 30% of B's; if B has 160 A., how many acres has A?

9. A's farm is 30^ of B's; if A has 180 A., how many acres has B?

10. A's farm is 30% of B's; if both together have 208 acres, how many has B?

11. A's farm is 30% of B's; if B has 280 acres more than A, how many has B?

12. An engine traversed 15% of a road in 18 hours, at the rate of 14 mi. 128 rd. per hour; what was the length of the entire road?

13. William is 4 ft, 7 in. high; his brother is 20% taller; what is the height of the latter?

14. A trade dollar weighs 420 grains, of which 10% is alloy; how much pure silver in 640 trade dollars?

15. The eagle contains 258 grains, of which 10% is alloy; how much alloy must be mixed with 12.9 oz. of pure gold for the coinage of eagles?

16. What will be the weight of the alloy in $1000 of gold coin?

17. What weight of pure gold must be mixed with 140 oz. Troy of alloy for coinage of gold coin?

18. 26% of a farmer's potatoes spoiled, and he still had 407 bushels of sound ones; how many bushels had he at first?

19. A ship's crew had provision for 18 weeks, but a storm destroyed 25% of it; how long would the remainder last them?

20. What number, less 40% of itself, would be equal to 40% of 930?

21. A man owed $60500; but, being unable to pay in full, settled for $44770; what % of his debt did he pay?

22. A publishing house sold 15% more books this year than last year; if the number this year is 52900 dozen, what was the number last year?

23. What number, increased by 120% of itself, would equal 803?

24. A tenant pays his landlord 3 pk. out of every 5 bu. he raises; what % is that?

25. 34000000 letters were posted, of which 170,000 were sent to the dead letter office; what % was that?

26. A field is 168 rods long, and its length is 40% greater than its breadth; find the area of the field.

27. A field is 168 rods long, and its breadth is 40% less than its length; find the area of the field.

28. A field is 168 rods wide, and its breadth is 40% less than its length; find the area of the field.

29. A farmer raised 450 bu. of oats the first year; the second year his crop was 20% greater than the first; and the third year, 25% less than the second; how many bushels did he raise in the three years?

30. I have 47 A. 40 sq. rd. of beech woods, which is 27% of my woodland; how many acres of timber have I in all?

31. Ore lost 32% in smelting, and 433 T. 10 cwt. of blooms were produced; how much ore was smelted?

LESSON 171

Name _____

INTELLECTUAL LESSON 64 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Children complete the following problems involving percentages.

1. What part is 2 percent?

2. What part is:
   a. 4 percent?

   b. 5 percent?

   c. 6 percent?

   d. 8 percent?

3. What part is:
   a. 10 percent?

   b. 12 percent?

c. 15 percent?

4. What part is:
   a. 16 percent?

   b. 20 percent?

   c. 24 percent?

5. What part is:
   a. 25 percent?

   b. 28 percent?

   c. 30 percent?

6. What part is:
   a. 32 percent?

b. 35 percent?

c. 36 percent?

7. What part is:
   a. 40 percent?

   b. 45 percent?

   c. 48 percent?

8. What part is:
   a. 50 percent?

   b. 60 percent?

   c. 70 percent?

9. What part is:
    a. 75 percent?

    b. 80 percent?

    c. 90 percent?

10. What part is 2/12 percent?

11. What part is:
    a. 3 1/2 percent?

    b. 6 1/4 percent?

12. What part is:
    a. 6 2/3 percent?

    b. 7 1/2 percent?

13. What part is:
    a. 8 1/3 percent?

    b. 12 1/2 percent?

14. What part is:
    a. 13 1/3 percent?

    b. 16 2/3 percent?

15. What part is:
    a. 17 1/2 percent?

    b. 18 3/4 percent?

16. What part is:
    a. 23 1/3 percent?

    b. 31 1/4 percent?

17. What part is:
    a. 37 1/2 percent?

    b. 43 3/4 percent?

18. What part is:
    a. 56 1/4 percent?

    b. 62 1/2 percent?

19. What part is 66 2/3 percent?

20. What part is 87 1/2 percent?

LESSON 172

Name _____

INTELLECTUAL LESSON 65 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Children complete the following problems involving percentages.

1. What is 4 percent of 50?

2. What is 6 percent of:
   a. 50?

   b. 100?

3. What is 10 percent of:
   a. 20?

   b. 30?

4. What is 12 1/2 percent of:
    a. 24?

    b. 48?

5. What is 25 percent of:
    a. $32?

    b. $80?

6. What is 33 1/3 percent of 51 bushels?

7. What is 50 percent of 14 horses?

8. I bought a piece of cloth for $32, and sold it so as to gain 6 1/4 percent: what did I gain?

9. A grocer bought a bbl. of sugar for $10, and in selling it gained 10 percent: how much did he gain?

10. A farmer, having a flock of 40 sheep, lost 5 percent of them: how many had he left?

11. A flock of 50 sheep increases 10 percent in one year: how many are then in the flock?

12. A lady, having $20, spent 10 percent for muslin, and 10 percent of the remainder for calico: how much did she pay for both?

13. I paid 30 ct. per yd. for cambric: at what price must I sell it, to make 10 percent?

14. What is 12 1/2 percent of:
    a. 8 ct. per yard.?

    b. 16 ct. per yard.?

15. What is 8 1/3 percent of:
    a. 6 ct. per lb.?

    b. 18 ct. per lb.?

16. To make 25 per cent profit, what must delaine be sold for that cost:
    a. 12 ct. per yd.?

    b. 16 ct. per yd.?

    c. 20 ct. per yd.?

    d. 35 ct. per yd.?

LESSON 173

Name _____

INTELLECTUAL LESSON 66 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Children complete the following problems involving percentages.

1. How many percent is 1/2?

2. How many percent is:
   a. 1/3?

   b. 2/3?

   c. 1/4?

3. How many percent is:
   a. 3/4?

   b. 1/5?

   c. 2/5?

4. How many percent is:
    a. 3/5?

    b. 4/5?

    c. 1/6?

5. How many percent is:
    a. 1/8?

    b. 3/8?

    c. 5/8?

6. How many percent is:
    a. 1/10?

    b. 3/10?

    c. 7/10?

7. How many percent is:
    a. 9/10?

    b. 1/12?

    c. 5/12?

8. How many percent is:
    a. 1/15?

    b. 1/16?

    c. 3/16?

9. How many percent is:
    a. 5/16?

    b. 1/20?

    c. 3/20?

10. How many percent is:
    a. 7/20?

    b. 9/20?

    c. 11/20?

11. How many percent is:
    a. 1/25?

    b. 2/25?

    c. 3/25

12. How many percent is:
    a. 4/25?

    b. 6/25?

    c. 7/25?

13. How many percent is:
    a. 8/25?

    b. 9/25?

    c. 11/25?

14. How many percent is:
    a. 7/30?

    b. 2/35?

    c. 9/40?

15. How many percent is:
    a. 11/40?

    b. 6/45?

    c. 5/48?

16. How many percent is:
    a. 1/50?

    b. 3/50?

    c. 7/50?

17. How many percent is:
    a. 9/50?

    b. 1/60?

    c. 1/75?

18. How many percent is:
    a. 15/24?

    b. 18/24?

    c. 21/24?

19. How many percent is:
    a. 18/32?

    b. 22/32?

    c. 26/32?

20. How many percent is:
    a. 6/36?

    b. 18/36?

    c. 30/36?

21. How many percent is:
    a. 20/48?

    b. 28/48?

    c. 33/48?

22. How many percent is:
    a. 44/48?

    b. 45/48?

    c. 12/80?

LESSON 174

Name _____

INTELLECTUAL LESSON 67 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Children complete the following problems involving percentages.

1. Two is what percent of 5?

2. Three is what percent of:
   a. 5?

   b. 12?

3. Four is what percent of:
   a. 8?

   b. 32?

4. Five dollars are what percent of:
   a. $20?

   b. $30?

5. Eight men are what percent of 160 men?

6. There are 36 pupils enrolled in a certain school; if 9 are absent, what is the percent of absence?

7. Out of 60 pupils in a school, 20 study geography: what percent is that of the whole number?

8. There are 45 pupils enrolled in a certain primary school; on a certain day only 30 of them were present, what was the percent of attendance?

9. A grocer buys coffee at 25 ct. per pound, and sells it at a profit of 5 ct. per pound: what is his gain percent?

10. A merchant bought cloth at $5 per yard, and sold it at $7 per yard: what percent did he gain?

11. James bought a melon for 4 ct, and sold it for 5 ct.: what percent did he gain?

12. An orange was bought for 5 ct., and sold for 4 ct.: what was the percent of loss?

13. Thomas bought a watch for $4, and sold it for $6: what percent did he gain?

14. Henry bought a horse for $15, and sold it for $24: what percent did he gain?

15. A keg of wine holding 5 gal., lost 6 qt. by leakage: what was the loss percent?

16. By selling citrons at 6 ct. each, John cleared 1/5 of the first cost: what percent would he have cleared by selling them at 8 ct. each?

17. A merchant bought cloth at the rate of 6 yd. for $3, and sold it at the rate of 5 yd. for $4: what percent did he gain?

18. Henry sold melons at 8 ct. each, and lost 1/5 of the first cost: what percent would he have lost by selling them at 3 for 25 ct.: what percent would he have gained by selling them at 2 for 25 ct.?

19. James bought a lot of lemons, at the rate of 2 for 3 ct.; but, finding them damaged, he sold them at the rate of 3 for 2 ct.; what percent did he lose?

LESSON 175

Name _____

INTELLECTUAL LESSON 68 Date _____

OBJECTIVE(S)

- Solve the following problems involving percentages.

Directions: Children complete the following problems involving percentages.

1. Sold a watch for $12, and gained 20 percent: what was the cost?

2. I sold a piece of cloth for $26, and gained 30 percent: what did the cloth cost me?

3. If there is a gain of 40 percent when muslin is sold at 14 ct. a yd., what is the cost price?

4. By selling a horse for $81, there was a gain of 12 1/2 percent: what did the horse cost?

5. Sold a horse for $63, and lost 10 percent: what was the cost?

6. Thomas sold a watch for $21, and gained 75 percent: what did he pay for it?

7. James sold 10 oranges for 40 ct., and gained 33 1/3 percent: how much did each orange cost?

8. Sold a watch for $10, by which I gained 25 percent: what would I have gained by selling it for $12?

9. By selling muslin at 7 ct. per yd., there is a loss of 12 1/2 percent: what will be the loss percent by selling it at 6 ct. per yd.?

10. By selling my horse for $35, there was a loss of 16 2/3 percent: what would have been the gain percent by selling him for $63?

11. I bought a watch for $18, which was 20 percent more than its value: I sold it at 10 percent less than its value: what sum did I lose?

12. A sold B a watch for $60, and gained 20 percent: afterward B sold it and lost 20 percent on what it cost him: how much did B lose more than A gained?

13. A watch-maker sold two watches for $30 each: on one he gained 25 percent, and on the other he lost 25 percent: how much did he lose by the sale?

14. By selling 4 apples for 3 ct., a dealer gains 50 percent: what percent will he gain by selling them at the rate of 5 for 4 ct,?

15. Sold 5 lemons for 4 ct., and lost 20 percent: what percent did I lose by selling 6 for 5 ct.?

16. Two-thirds of 10 percent of 60 are 1/2 of what percent of 40?

17. One-half of 3/5 of 50 percent of 120 is 10 less than 20 percent of what?

18. One-fourth of 2/3 of 60 percent of 10 is 5 less than 50 percent of what?

19. Three-fourths of 2/5 of 75 percent of 15 are 1 3/5 more, than 50 percent of what?

20. One and one-half times 2/3 of 25 percent of 4 are 25 percent of 1/2 of what number?

