



# 8th Grade Summer Math Assignment

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Score: \_\_\_\_\_/125

## Welcome to 8<sup>th</sup> Grade,

### 8th Grade Summer Math Assignment:

1. Student will complete all 25 assignments on Buzz Math
2. Student will complete Pretest.
3. Student will read teacher's notes and examples for each concept.
4. Student will complete skills practice questions for each concept.
5. Student will complete Posttest.

The packet will be graded on Thursday August 17th. The packet & the Buzz Math will receive a review assignment grade for each.

### **Internet Resource:**

1. Student created an account on Buzz Math in 7<sup>th</sup> Grade Math Class.

**Go to:** <https://www.buzzmath.com/signin>

Username: 1<sup>st</sup> and Last Name (no spaces)

Password: Initials and Student ID (no spaces)

2. Complete 25 Assignments
  - a. Open Teacher Assignments
  - b. To reinforce 7<sup>th</sup> grade skills students will work on the following topics:
    1. Rational Numbers and Computations
    2. Expressions
    3. Equations and Inequalities
    4. Geometry and Measurements
3. If a current student was absent on the day of set-up or new to MICMS, please email Mrs. Albanese [albaneka@collierschools.com](mailto:albaneka@collierschools.com) over the summer for directions to set-up Buzz Math Account.

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Score: \_\_\_\_\_/25

Buzz Math Summer Assignments  
Due Thursday 8/17

<b>Assignment</b>	<b>Date Completed</b>
Review : Rational & Irrational Numbers and Computation	
Exponents: Powers with Positive Bases	
Exponents: Powers with Negative Bases	
Using Operations with Exponents	
Review: Relations. Functions and Coordinate Graphs	
Solving Unit Rate Problems	
Proportional Relationships	
Proportional Relationships and Graphs	
Review: Expressions and Equations	
Simplifying Algebraic Expressions: Like Terms	
Simplifying Algebraic Expressions: Introducing Unlike Terms	
Simplifying Algebraic Expressions: Using Addition & Subtraction	
Equivalent Expressions and The Distributive Property	
Simplifying Algebraic Expressions: Using the Distributive Property	
Simplifying Algebraic Expressions: Using Divisions	
Writing Algebraic Expressions:	
Writing Algebraic Expressions: Representing Quantities in Real World Situations	
Writing Algebraic Equations to Solve Problems	
Solving One-Step and Two-Step Equations	
Using One-Step and Two-Step Equations to Solve Problems	
Review: Data, Graphs and Probability	
Review: Geometry and Measurements	
Angle Measures	
Scale Factors	
Finding Missing Measures in Similar Figures	

## Pretest

Write each fraction as a decimal. Use a bar to show a repeating decimal.

1.  $-\frac{3}{25}$

1. \_\_\_\_\_

2.  $\frac{2}{7}$

2. \_\_\_\_\_

Write each decimal as a fraction or mixed number in simplest form.

3. 0.38

3. \_\_\_\_\_

4.  $-5.\bar{5}$

4. \_\_\_\_\_

Replace each  $\bullet$  with  $<$ ,  $>$ , or  $=$  to make a true sentence.

5.  $-0.58 \bullet -\frac{1}{4}$

5. \_\_\_\_\_

6.  $1\frac{2}{3} \bullet 1\frac{5}{7}$

6. \_\_\_\_\_

Find each product or quotient. Write in simplest form.

7.  $-\frac{2}{9} \cdot \frac{3}{14}$

7. \_\_\_\_\_

8.  $\frac{5}{6} \div \left(\frac{-7}{18}\right)$

8. \_\_\_\_\_

Find each sum or difference. Write in simplest form.

9.  $-\frac{3}{7} + \frac{5}{14}$

9. \_\_\_\_\_

10.  $\frac{3}{12} - \frac{5}{12}$

10. \_\_\_\_\_

Evaluate each expression if  $a = 2\frac{1}{2}$ ,  $c = 6$ ,  $p = \frac{1}{3}$  and  $r = \frac{5}{8}$ .

11.  $pr$

11. \_\_\_\_\_

12.  $r \div a$

12. \_\_\_\_\_

13.  $ac + p$

13. \_\_\_\_\_

14. A U.S. dollar bill remains in circulation about  $1\frac{1}{4}$  years.

14. \_\_\_\_\_

A U.S. coin is in circulation about  $22\frac{1}{2}$  times longer.

About how long is a coin in circulation?

### Rational Numbers:

A number that can be written as a fraction is a **rational number**. Mixed numbers, integers, terminating decimals, and repeating decimals can all be written as fractions. Any number that can be expressed as  $\frac{a}{b}$ , where  $a$  and  $b$  are integers and  $b \neq 0$  is a rational number.

**Examples:** Write each number as a fraction.

a.  $3\frac{2}{5}$

$3\frac{2}{5} = \frac{17}{5}$

Convert mixed to improper

*Squiggly Do*

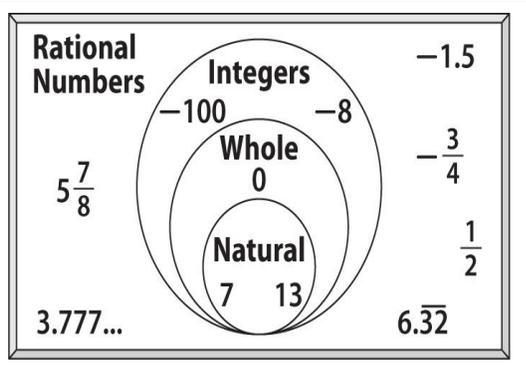
b. 0.14

0.14 is 14 hundredths.

$0.14 = \frac{14}{100}$  or  $\frac{7}{50}$  Simplify.

Numbers can be classified into a variety of different sets. The diagram at the right illustrates the relationships among the sets of **natural numbers**, **whole numbers**, **integers**, and **rational numbers**.

Decimal numbers such as  $\pi = 3.141592\dots$  and  $6.767767776\dots$  are infinite and nonrepeating. They are called **irrational numbers**.



**Examples:** Identify all sets to which each number belongs.

a.  $-0.08$  This is neither a whole number nor an integer. Since  $-0.08$  can be written as  $-\frac{8}{100}$ , it is rational.

b.  $8.282282228\dots$  This is a nonterminating and nonrepeating decimal. So, it is irrational.

### PRACTICE:

Write each number as a fraction.

15.  $1\frac{1}{5}$

15. \_\_\_\_\_

16. 0.7

16. \_\_\_\_\_

17.  $-9.08$

17. \_\_\_\_\_

18.  $-0.0\bar{6}$

18. \_\_\_\_\_

Identify all sets to which each number belongs.

19.  $-12$

19. \_\_\_\_\_

20. 8.5

20. \_\_\_\_\_

21. 0

21. \_\_\_\_\_

### Integers and Absolute Value:

A **negative number** is a number less than zero. A **positive number** is a number greater than zero. The set of **integers** can be written  $\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$  where  $\dots$  means *continues indefinitely*. Two integers can be compared using an **inequality**, which is a mathematical sentence containing  $<$  or  $>$ .

**Examples:** Write an integer for each situation.

- a. 16 feet below the surface The integer is  $-16$
- b. 5 strokes over par The integer is  $+5$  or  $5$

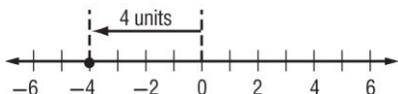
Numbers on opposite sides of zero and the same distance from zero have the same **absolute value**.

- 1) Absolute Value is Always Positive, distance cannot be negative
- 2) The symbol for absolute value is two vertical bars on either side of the number  
 $|2| = 2$  and  $|-2| = 2$
- 3) Absolute Value is a grouping symbol. Perform operation inside & then find absolute value

$$|7 - 10| = |-3| = 3$$

**Examples:** Evaluate each expression:

a.  $|-4|$



b.  $|-3 + 6 \times -2|$

$$|-3 - 12|$$

$$|-15| = 15$$

$|-4| = 4$  On the number line,  $-4$  is 4 units from 0.

### PRACTICE:

Write an integer for each situation.

22. A company has a loss of \$100,000 22) \_\_\_\_\_

23. an elevator ascends 17 floors 23) \_\_\_\_\_

24.  $11^{\circ}\text{F}$  below zero 24) \_\_\_\_\_

25. a profit of \$52 on a sale 25) \_\_\_\_\_

Evaluate each expression:

26.  $|15| - |6|$  26) \_\_\_\_\_

27.  $|6| - |15|$  27) \_\_\_\_\_

28.  $|15 - 6|$  28) \_\_\_\_\_

## Operations with Integers:

To add or subtract integers with the same sign just apply the left to right rule.

**Examples:** Find the sum or difference.

a.  $3 + 4 = 7$

b.  $-5 + 4 = -1$

c.  $-5 - 4 = -9$

d.  $15 - 2 = 13$

To add or subtract integers with different signs and parenthesis, rewrite each expression removing parenthesis and performing left to right rule.

**Examples:** Find the sum or difference.

a.  $-3 + (-4)$

$$-3 - 4 = -7$$

Remove + sign and squish everything over  
We call this a squishy

c.  $20 - (-15)$

$$20 + 15 = 35$$

A minus next to a negative cancel out  
We call this a not not

b.  $12 + (-4) + 9 + (-7)$

$$12 - 4 + 9 - 7$$

$$= 10$$

Rewrite without parenthesis  
Apply left to right rule

d.  $-10 - (-21) + (-25) - (-8)$

$$-10 + 21 - 25 + 8$$

$$= -6$$

To multiply or divide integers with the same signs, the product or quotient will be positive  
To multiply or divide integers with different signs, the product or quotient will be negative.

**Examples:** Find each product or quotient

a.  $6(6) = 36$

b.  $-8(5) = 40$

c.  $14 \div 2 = 7$

d.  $\frac{-42}{6} = -7$

An **algebraic expression** is a combination of variables, numbers, and at least one operation. A **variable** is a letter or symbol used to represent an unknown value.

To evaluate an algebraic expression, replace the variable(s) with known values and follow the order of operations.

**Example:** Evaluate the expression if  $r = 6$  and  $s = 2$ .

$$8s - 2r$$

$$8s - 2r = 8(2) - 2(6)$$

$$= 16 - 12 \text{ or } 4$$

Replace  $r$  with 6 and  $s$  with 2.

Multiply. Then subtract.

**PRACTICE:**

**For questions 29 – 38, find the sum or difference:**

29.  $4 + 5 + (-4)$

29. \_\_\_\_\_

30.  $-3 + 8 + (-9)$

30. \_\_\_\_\_

31.  $-6 + (-2) + (-1)$

31. \_\_\_\_\_

32.  $10 + (-5) + 6$

32. \_\_\_\_\_

33.  $32 + (-4) + (-9)$

33. \_\_\_\_\_

34.  $-4 - (-10)$

34. \_\_\_\_\_

35.  $-16 - (-10)$

35. \_\_\_\_\_

36.  $11 - (-9)$

36. \_\_\_\_\_

37.  $-1 - (-8)$

37. \_\_\_\_\_

38.  $4 - 22$

38. \_\_\_\_\_

**For questions 39-48, find the product or quotient:**

39.  $5(-11)$

39. \_\_\_\_\_

40.  $-15(-4)$

40. \_\_\_\_\_

41.  $11(3)(-2)$

41. \_\_\_\_\_

42.  $-5(-6)(7)$

42. \_\_\_\_\_

43.  $-2(-5)(-9)$

43. \_\_\_\_\_

44.  $-124 \div 4$

44. \_\_\_\_\_

45.  $60 \div 15$

45. \_\_\_\_\_

46.  $\frac{-45}{3}$

46. \_\_\_\_\_

47.  $\frac{-63}{-7}$

47. \_\_\_\_\_

48.  $\frac{48}{-6}$

48. \_\_\_\_\_

Evaluate each expression if  $r = 2$ ,  $s = 3$ , and  $t = 12$ . Show work.

49.  $2t - rs$

49. \_\_\_\_\_

50.  $\frac{t}{rs}$

50. \_\_\_\_\_

51.  $t(4 + r)$

51. \_\_\_\_\_

52.  $4s + 5r$

52. \_\_\_\_\_

53.  $\frac{5t}{(r + 3)}$

53. \_\_\_\_\_

54.  $7(t - 2s)$

54. \_\_\_\_\_

55.  $\frac{10t}{4s}$

55. \_\_\_\_\_

56.  $(t + r) - (r + s)$

56. \_\_\_\_\_

57.  $st - rs$

57. \_\_\_\_\_

## Operations with Fractions:

To add or subtract fractions with the same denominators, called **like denominators**, add or subtract the numerators and write the sum or difference over the denominator.

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}, \text{ where } c \neq 0.$$

$$\frac{a}{c} - \frac{b}{c} = \frac{a-b}{c}, \text{ where } c \neq 0.$$

**Example 1:** Find  $\frac{3}{8} + \left(-\frac{7}{8}\right)$ . Write in simplest form.

$$\frac{3}{8} - \frac{7}{8} = \frac{3-7}{8}$$

The denominators are the same. Add the numerators.

$$= \frac{-4}{8} \text{ or } -\frac{1}{2}$$

Simplify.

**Example 2** Find  $\frac{3}{8} - \frac{5}{8}$ . Write in simplest form.

$$\frac{3}{8} - \frac{5}{8} = \frac{3-5}{8}$$

The denominators are the same. Subtract the numerators.

$$= -\frac{2}{8} \text{ or } -\frac{1}{4}$$

Simplify.

Fractions with different denominators are called **unlike fractions**. To add or subtract fractions with unlike denominators, rename the fractions with a common denominator. Then add or subtract and simplify.

**Example 3:** Find  $\frac{4}{7} + \frac{1}{3}$ . Write in simplest form.

$$\frac{4}{7} + \frac{1}{3} = \frac{4}{7} \cdot \frac{3}{3} + \frac{1}{3} \cdot \frac{7}{7}$$

Use  $7 \cdot 3$  or 21 as the common denominator.

$$= \frac{12}{21} + \frac{7}{21}$$

Rename each fraction with the common denominator.

$$= \frac{19}{21}$$

Add the numerators.

**Example 4:** Find  $9\frac{2}{9} + 8\frac{5}{6}$ . Write in simplest form.

$$9\frac{2}{9} - 8\frac{5}{6} = \frac{83}{9} - \frac{53}{6}$$

Write the mixed numbers as improper fractions.

$$= \frac{83}{9} \cdot \frac{2}{2} - \frac{53}{6} \cdot \frac{3}{3}$$

Rename fractions using the LCD, 18.

$$= \frac{166}{18} - \frac{159}{18}$$

Simplify.

$$= \frac{7}{18}$$

Subtract the numerators.

To add or subtract mixed numbers:

- 1) convert to improper,
- 2) rename denominators if necessary
- 3) follow rules of integers
- 4) simplify if necessary

To multiply fractions, multiply the numerators and multiply the denominators:  $\frac{a}{b} \cdot \frac{c}{d} = \frac{a \cdot c}{b \cdot d}$ , where  $b, d \neq 0$ . Fractions may be simplified before or after multiplying. For negative fractions, assign the negative sign to the numerator.

**Example 1:** Find  $7\frac{1}{2} \cdot 2\frac{2}{3}$ . Write in simplest form.

$$7\frac{1}{2} \cdot 2\frac{2}{3} = \frac{15}{2} \cdot \frac{8}{3} \quad \text{Convert mixed numbers to improper fractions.}$$

$$= \frac{\cancel{15}^3 \cancel{8}_2}{\cancel{2}_1 \cancel{3}_2} \quad \text{Divide 15 and 3 by 3, and 8 and 2 by 2.}$$

$$= \frac{5 \cdot 4}{1 \cdot 1} \quad \text{Multiply.}$$

$$= \frac{20}{1} \text{ or } 20 \quad \text{Simplify}$$

Two numbers whose product is 1 are called multiplicative inverses or reciprocals.

For any fraction  $\frac{a}{b}$ , where  $a, b \neq 0$ ,  $\frac{b}{a}$  is the multiplicative inverse and  $\frac{a}{b} \cdot \frac{b}{a} = 1$ .

This means that  $\frac{2}{3}$  and  $\frac{3}{2}$  are multiplicative inverses because  $\frac{2}{3} \cdot \frac{3}{2} = 1$ .

To divide by a fraction, multiply by its multiplicative inverse:  $\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \cdot \frac{d}{c} = \frac{ad}{bc}$ , where  $b, c, d \neq 0$ .

**Example 2:** Find  $\frac{3}{4} \div -\frac{5}{8}$ . Write in simplest form.

$$\frac{3}{4} \div -\frac{5}{8} = \frac{3}{4} \cdot -\frac{8}{5} \quad \text{Multiply by the multiplicative inverse of } -\frac{5}{8}, \frac{-8}{5}.$$

$$= \frac{3}{\cancel{4}_1} \cdot \frac{\cancel{8}^2}{5} \quad \text{Divide 4 and 8 by their GCF, 4.}$$

$$= -\frac{6}{5} \text{ or } -1\frac{1}{5} \quad \text{Simplify.}$$

Algebraic expressions are expressions which contain one or more variables. Variables can represent fractions in algebraic expressions.

**Example 3:** Evaluate  $\frac{2}{3}ab$  if  $a = 3\frac{3}{7}$  and  $b = -\frac{5}{12}$ . Write the product in simplest form.

$$\frac{2}{3}ab = \frac{2}{3} \left(3\frac{3}{7}\right) \left(-\frac{5}{12}\right) \quad \text{Replace } a \text{ with } 3\frac{3}{7} \text{ and } b \text{ with } -\frac{5}{12}.$$

$$= \frac{2}{3} \left(\frac{24}{7}\right) \left(\frac{-5}{12}\right) \quad \text{Rename } 3\frac{3}{7} \text{ as } \frac{24}{7}.$$

$$= \frac{2}{3} \left(\frac{\cancel{24}^2}{7}\right) \left(\frac{-5}{\cancel{12}_3}\right) \quad \text{The GCF of 24 and 12 is 12.}$$

$$= -\frac{20}{21} \text{ or } -\frac{20}{21} \quad \text{Simplify}$$

**PRACTICE:**

For questions 58 – 67, find either the sum or the difference. Write in simplest form.

58.  $\frac{8}{9} + \frac{2}{5}$  58. \_\_\_\_\_

59.  $-\frac{2}{3} + \frac{1}{4}$  59. \_\_\_\_\_

60.  $7\frac{4}{9} + 9\frac{1}{6}$  60. \_\_\_\_\_

61.  $-7\frac{1}{2} + \left(-3\frac{2}{9}\right)$  61. \_\_\_\_\_

62.  $-10\frac{1}{7} + 6\frac{1}{4}$  62. \_\_\_\_\_

63.  $-\frac{7}{9} + \frac{4}{5}$  63. \_\_\_\_\_

64.  $\frac{5}{12} - \left(-\frac{3}{8}\right)$  64. \_\_\_\_\_

65.  $5\frac{1}{10} - 3\frac{2}{3}$  65. \_\_\_\_\_

66.  $-6\frac{3}{5} - \left(-2\frac{1}{4}\right)$  66. \_\_\_\_\_

67.  $10\frac{5}{6} - \left(-5\frac{2}{3}\right)$  67. \_\_\_\_\_

For questions 68-72 find the product or the quotient. Write in simplest form.

68.  $\frac{1}{2} \cdot \frac{3}{5}$  68. \_\_\_\_\_

69.  $-\frac{8}{9} \cdot \frac{5}{16}$  69. \_\_\_\_\_

70.  $\frac{3}{10} \cdot \left(-\frac{1}{4}\right)$  70. \_\_\_\_\_

71.  $-2\frac{1}{8} \cdot \left(-4\frac{4}{7}\right)$  71. \_\_\_\_\_

72.  $2\frac{4}{9} \cdot \left(-3\frac{6}{11}\right)$  72. \_\_\_\_\_

For questions 73-77, find the multiplicative inverse of each number.

73.  $\frac{7}{12}$

73. \_\_\_\_\_

74.  $-\frac{3}{10}$

74. \_\_\_\_\_

75.  $-64$

75. \_\_\_\_\_

76.  $8\frac{1}{3}$

76. \_\_\_\_\_

77.  $-10\frac{2}{3}$

77. \_\_\_\_\_

For questions 78-82, find the quotient. Write in simplest form.

78.  $\frac{5}{16} \div \frac{5}{8}$

78. \_\_\_\_\_

79.  $\frac{16}{21} \div \left(-\frac{2}{7}\right)$

79. \_\_\_\_\_

80.  $-\frac{4}{5} \div \frac{3}{10}$

80. \_\_\_\_\_

81.  $\frac{18}{21} \div 3$

81. \_\_\_\_\_

82.  $-4\frac{5}{8} \div \left(-3\frac{1}{3}\right)$

82. \_\_\_\_\_

For questions 83-87, evaluate each expression if  $x = \frac{7}{10}$ ,  $y = -4\frac{2}{5}$ , and  $z = -\frac{4}{7}$ .

Write the product in simplest form.

83.  $xy$

83. \_\_\_\_\_

84.  $xyz$

84. \_\_\_\_\_

85.  $5\frac{5}{6}xz$

85. \_\_\_\_\_

86.  $\frac{2}{5} \div (-x)$

86. \_\_\_\_\_

87.  $\frac{9}{10} \div y$

87. \_\_\_\_\_

## Words and Expressions:

A **numerical expression** contains a combination of numbers and operations such as addition, subtraction, multiplication, and division. Verbal phrases can be translated into numerical expressions by replacing words with operations and numbers.

+	-	×	÷
plus	minus	times	divide
the sum of	the difference of	the product of	the quotient of
increased by	decreased by	of	divided by
more than	less than		among

**Example:** Write a numerical expression for the verbal phrase.

The product of seventeen and three

Expression:  $17 \times 3$

Evaluate, or find the numerical value of, expressions with more than one operation by following the **order of operations**. Remember **PEMDAS**

**Step 1** Evaluate the expressions inside grouping symbols.

**Step 2** Evaluate exponents

**Step 3** Multiply and/or divide from left to right.

**Step 4** Add and/or subtract from left to right.

**Example:** Evaluate the expression.

$$4(3 + 6) + 2 \cdot 11$$

$$\begin{aligned} 4(3 + 6) + 2 \cdot 11 &= 4(9) + 2 \cdot 11 \\ &= 36 + 22 \\ &= 58 \end{aligned}$$

Evaluate  $(3 + 6)$ .

Multiply 4 and 9, and 2 and 11.

Add 36 and 22

### PRACTICE:

**Write a numerical expression for each verbal phrase.**

88. eleven less than twenty 88. \_\_\_\_\_

89. the product of seven and twelve 89. \_\_\_\_\_

90. the quotient of forty and eight 90. \_\_\_\_\_

91. three times seventeen 91. \_\_\_\_\_

**Evaluate each expression.**

92.  $2(6 + 2) - 4 \cdot 3$  92. \_\_\_\_\_

93.  $5(6 + 1) - 3 \cdot 3$  93. \_\_\_\_\_

94.  $2[(13 - 4) + 2(2)]$  94. \_\_\_\_\_

95.  $3[(2 + 7) \div 9] - 3$  95. \_\_\_\_\_

## Algebraic Expressions

The letter  $x$  is most often used as a variable.

$$x + 3c$$

$7d$  means  $7 \times d$ .

$mn$  means  $m \times n$ .

$$7d - 2$$

$\frac{b}{5}$  means  $b \div 5$ .

$$\frac{b}{5}$$

**Examples:** Translate each phrase into an algebraic expression. Let  $x$  represent the number

- |  |                    |
|--|--------------------|
| 1. twelve more than four times a number      | $4x + 12$          |
| 2. the difference of sixty and a number      | $60 - x$           |
| 3. the quotient of the number and four       | $\frac{x}{4}$      |
| 4. a number less than twenty-three           | $23 - x$           |
| 5. twenty divided among a number minus three | $\frac{20}{x} - 3$ |

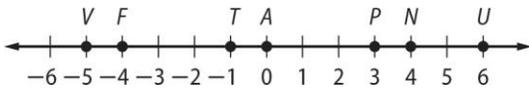
### PRACTICE:

Translate each phrase into an algebraic expression. Let  $x$  represent the number.

- |   |            |
|---|------------|
| 96. the quotient of a number and thirteen                         | 96. _____  |
| 97. a number added to seventeen                                   | 97. _____  |
| 98. the difference of a number and eighteen                       | 98. _____  |
| 99. eight more than the product of a number and four              | 99. _____  |
| 100. six times a number minus eleven                              | 100. _____ |
| 101. the product of eight hundred and a number                    | 101. _____ |
| 102. the quotient of thirty and the product of ten times a number | 102. _____ |
| 103. five times the sum of three and some number                  | 103. _____ |

**Post Test**

104. Which two points represent integers with the same absolute value? 104. \_\_\_\_\_



- A. points *V* and *U*    B. points *F* and *P*  
 C. points *T* and *A*    D. points *F* and *N*

105. Danielle owes her brother \$40. She pays him \$25. 105. \_\_\_\_\_  
 Write an integer to represent how much she still owes her brother.

106. Which decimal is equivalent to  $\frac{19}{30}$ ? 106. \_\_\_\_\_

- A. 0.63                      B.  $0.6\bar{3}$   
 C.  $0.\overline{63}$                   D.  $0.06\bar{3}$

107. Suppose a submarine is diving from the surface of the water at a 107. \_\_\_\_\_  
 rate of 80 feet per minute.

Which integer represents the depth of the submarine after 7 minutes?

- A. 80                          B. 560  
 C. -80                        D. -560

108. Suppose a 24-acre plot of land is being divided into 108. \_\_\_\_\_  
 $\frac{1}{3}$ -acre lots for a housing development project. What  
 is the greatest number of lots possible in the development?

- F. 8 lots                      G. 27 lots  
 H. 56 lots                    J. 72 lots

109. A foreign exchange student wants to ship her belongings to her destination. 109. \_\_\_\_\_  
 The mass of each of three packages is shown in the table.  
 What is the total mass of all three packages?

Package	Mass (kg)
A	$22\frac{3}{8}$
B	$26\frac{1}{4}$
C	$18\frac{5}{8}$

110. Which of the following rational numbers is equivalent to a terminating decimal? 110. \_\_\_\_\_
- A.  $\frac{17}{20}$                       B.  $\frac{17}{22}$
- C.  $\frac{17}{24}$                       D.  $\frac{17}{26}$
111. The thickness of a CD is about  $\frac{1}{20}$  inch. If Carrie has a stack of 52 CDs, what is the height of the stack? 111. \_\_\_\_\_
112. Angela painted  $\frac{3}{8}$  of a room. Todd painted  $\frac{2}{5}$  of the same room. What part of the room has been painted? 112. \_\_\_\_\_
113. Overnight the low temperature dropped to  $-6$  degrees Fahrenheit. If the high temperature during the day was 11 degrees Fahrenheit, what was the difference between the high and low temperatures? 113. \_\_\_\_\_
114. Identify all sets to which the following number belongs. 114. \_\_\_\_\_
- $4.\overline{22}$
- A. whole, integer, irrational    B. irrational
- C. rational                              D. whole, rational
115. A player's baseball average is found by dividing the number of hits by the total number of times at bat. A player has a batting average of 0.325. Write 0.325 as a fraction in simplest form. 115. \_\_\_\_\_
116. Jacob is  $5\frac{5}{6}$  feet tall and Linda is  $5\frac{1}{4}$  feet tall. How much taller is Jacob? 116. \_\_\_\_\_
117. A helicopter descended  $-50$  feet in 4 seconds. What value represents this change in height? 117. \_\_\_\_\_
- A.  $-12.5$  feet per second    B.  $-46$  feet per second
- C.  $-54$  feet per second    D.  $-200$  feet per second
118. Constance wants to sew trim around the sleeves and collar of a gymnastics leotard. She needs a piece of trim that is  $12\frac{1}{4}$  inches long for the sleeves and a piece that is  $19\frac{3}{4}$  inches long for the collar. She buys a 4-foot piece of trim. How much trim will she have left once she finishes the leotard? 118. \_\_\_\_\_

119. At the end of March, a computer company has a net worth of  $-\$14,587$ . 119. \_\_\_\_\_  
 By the end of December of the same year, the company's net worth  
 had increased by  $\$28,465$ .  
 What was the company's net worth at the end of December?

- A.  $-\$43,052$       B.  $-\$13,878$   
 C.  $\$13,878$       D.  $\$43,052$

120. Dexter wrote checks and made the deposits shown 120. \_\_\_\_\_  
 in his check registry. What was the change in  
 his balance after these transactions?

Date	Description	Payment Amount	Deposit Amount
12/12	cell phone	$\$85$	
12/14	deposit		$\$211$
12/14	groceries	$\$147$	
12/16	deposit		$\$75$
12/19	vet	$\$105$	

- A.  $-\$105$       B.  $-\$51$   
 C.  $\$337$       D.  $\$623$

121. What is the quotient,  $-1\frac{1}{2} \div \frac{2}{3}$  in simplest form? 121. \_\_\_\_\_

For questions 122-125, evaluate each expression if  $w = -3$ ,  $x = \frac{3}{4}$ , and  $y = -\frac{4}{5}$ .  
 Write answer in simplest form

122.  $-wy$  122. \_\_\_\_\_

123.  $xy \cdot xy$  123. \_\_\_\_\_

124.  $-\frac{1}{2} wx$  124. \_\_\_\_\_

125.  $\frac{x}{y}$  125. \_\_\_\_\_