

Name \_\_\_\_\_

Date \_\_\_\_\_

**Summer Work**

Improper Fraction	Multiples	Factors	Expression	Prime Number
Terms	Like Terms	Integers	Variable	Coefficient
Absolute Value	Ordered Pair	X Axis	Y Axis	Composite Number

Rate	Unit Rate	Proportion	Mean	Median	Mode
Variability	MAD	Absolute Deviation	Expression		Solution Set
Open Point	Closed Point	Properties of Equality	Frequency	IQR	Range
Equation	Ratio	Inequality	Inverse Operations	Variable	

- 1) When the numerator is greater than the denominator, resulting in a value that is greater than one: \_\_\_\_\_
- 2) A letter that represents an unknown number: \_\_\_\_\_
- 3) Separated by a plus or a minus sign: \_\_\_\_\_
- 4) Have the same variable raised to the same power \_\_\_\_\_
- 5) Is always positive because it is a measurement of distance: \_\_\_\_\_
- 6) The vertical line on a coordinate plane: \_\_\_\_\_
- 7) A number whose only factors are itself and one: \_\_\_\_\_
- 8) A number that has more than two factors: \_\_\_\_\_
- 9) A point made with the x and y coordinates: \_\_\_\_\_
- 10) The “times tables” of a numbers: \_\_\_\_\_
- 11) Numbers that go into other numbers: \_\_\_\_\_
- 12) The horizontal line on the coordinate plane: \_\_\_\_\_
- 13) Numbers that span from negative infinity to positive infinity: \_\_\_\_\_
- 14) Mathematical translations of English sentence that contain terms: \_\_\_\_\_
- 15) A comparison between two ratios \_\_\_\_\_

- 16) A number that comes before a variable that indicates multiplication \_\_\_\_\_
- 17) A mathematical “translation” of a real world scenario that can be evaluated \_\_\_\_\_
- 18) A ratio in which one unit is per “one” of another \_\_\_\_\_
- 19) A circle used when the number is **not** included in the solution set \_\_\_\_\_
- 20) A circle used when the number is included in the solution set \_\_\_\_\_
- 21) When two expressions are set equal to each other \_\_\_\_\_
- 22) State that what you do on one side of the equation must also be done on the other side of the equation \_\_\_\_\_
- 23) A letter that represents an unknown number \_\_\_\_\_
- 24) The set of numbers that makes an inequality true \_\_\_\_\_
- 25) The opposite operation to the one shown \_\_\_\_\_
- 26) The middle number in a data set \_\_\_\_\_
- 27) The average of a data set \_\_\_\_\_
- 28) The number with the highest frequency in a data set \_\_\_\_\_
- 29) How many times a number appears \_\_\_\_\_
- 30) Numbers in solution sets make these true \_\_\_\_\_
- 31) The difference between  $q_3$  and  $q_1$  \_\_\_\_\_
- 32) The difference between the mean and all of the numbers in a data set \_\_\_\_\_
- 33) The average of the difference between the mean and all of the numbers in a data set \_\_\_\_\_
- 34) How much the numbers in a data set vary \_\_\_\_\_
- 35) The difference between the max and the min \_\_\_\_\_
- 36) A ratio in which two quantities are in different units \_\_\_\_\_
- 37) A comparison between two quantities \_\_\_\_\_

**Part Two: Multiple choice. Choose the answer that best satisfies each of the following questions.**

38) Using remainders, what is the quotient of  $153 \div 13$ ?

- a. 11 r10
- b. 10 r23
- c. 12 r 2
- d. 10 r5

39) Using decimals in the quotient, what is  $162 \div 15$ ?

- a. 10.2
- b. 10.6
- c. 10.4
- d. 10.8

40) What is  $13/20 \div 39/40$  in simplest form?

- a.  $3/2$
- b.  $2/3$
- c.  $507/800$
- d.  $4/5$

41) What is  $15/17 \times 3/30$  in simplest form?

- a.  $34/3$
- b.  $45/510$
- c.  $3/34$
- d.  $450/51$

42) What is  $3 \frac{1}{2} \div 5 \frac{4}{6}$  in simplest form?

- a.  $21/34$
- b.  $15 \frac{4}{6}$
- c.  $34/21$
- d.  $15 \frac{2}{3}$

43) What is  $4 \frac{1}{2} \times 2 \frac{1}{3}$  as a mixed number in simplest form?

- a.  $21/2$
- b. Both a and c
- c.  $10 \frac{1}{2}$
- d. None

44) What is  $54 \div .18$ ?

- a. 30
- b. 300
- c. 3
- d. 3000

45) What is the product of 54 and .18?

- a. 972
- b. 9.72

- c. 97.2
- d. .0972

46) What is the least common multiple between 14 and 30?

- a. 2
- b. 140

- c. 30
- d. 210

47) What is the greatest common factor between 25 and 105?

- a. 5
- b. 25

- c. 1
- d. 15

48) What is the prime power factorization of 108?

- a.  $3^2 \times 2^3$
- b.  $2^2 \times 3^3$

- c.  $2^3 \times 3^2$
- d.  $2^6$

49) What is the prime factorization of 24?

- a.  $2 \times 2 \times 2 \times 3$
- b.  $12 \times 2$

- c.  $4 \times 2 \times 3$
- d.  $6 \times 2 \times 2$

50) What is  $|-17|$ ?

- a. -17
- b. All of the above

- c. 17
- d. None of the above

51) What is  $-|-15|$ ?

- a. -15
- b. All of the above

- c. 15
- d. None of the above

52) Evaluate the following expression:  $3 \times (3+3^3) \div 9$

- a. 30

- c. 90

b. 10

d. 9

53) Create an expression that represents "The sum of 5 times a number and 8."

a.  $8x + 5$

c.  $5x + 8$

b.  $5 + 8 + x$

d.  $5x \times 8$

54) If you start at the origin and move three units left and then five units up, at what ordered pair would you land?

a. (5, -3)

c. (3,5)

b. (-3,5)

d. (5,3)

55) What is the distance between (3,9) and (3, -10)?

a. 1 unit

c. 19 units

b. 0 units

d. -19 units

56) Evaluate the following expression:  $3x + 12 - 1x$ .

a.  $14x$

c.  $4x + 12$

b.  $2x + 12$

d.  $15x$

57) What are the coefficients in the following expression:  $4x - 12 + 10y - 3z$

a. X, y, and z

c. x, y, z, and 12

b. 4, 12, 10, and 3

d. 4, 10, and 3

58) What is the distance between (4, 12) and (12, 12)?

a. 8

c. -8

b. 16

d. -16

59) What property can you use to evaluate the following expression?  $3(4 + x)$

a. Commutative

c. Associative

b. Distributive

d. Identity

60) Solve the following equation:  $3x = 33$

a.  $x = 99$

c.  $x = 3$

b.  $x = 11$  d. None

61) Solve the following equation:  $x/25 = 100$

- a.  $x = 2500$  c.  $x = 4$   
b.  $x = 75$  d. None

62) Solve the following equation:  $x - 12 = 30$

- a.  $x = 18$  c.  $x = 42$   
b.  $x = 360$  d. None

63) Solve the following equation:  $45 + x = 90$

- a.  $x = 135$  c.  $x = 45$   
b.  $x = 2$  d. None

64) Evaluate the following expression:  $3 + (2 + 5^2) \div 9$

- a. 27 c. 3.3  
b. 3 d. 6

65) What kind of point would you use, and what direction would the line go, if you were to graph the inequality  $x > 7$ ?

- a. Open/Left c. Open/Right  
b. Closed/Left d. Closed/Right

66) What can be the solution set of the following inequality?  $3x \geq 12$

- a.  $\{4, 5, 6, \dots\}$  c.  $\{5, 6, 7, \dots\}$   
b.  $\{0, 1, 2, \dots\}$  d. None

67) If Marshall drives a car that uses 8 gallons of gas to go 260 miles, what is the unit rate of miles per gallon?

- a. .03 c. 32.5  
b. 25 d. 2080

68) What is 30 percent of 270?

- a. 90 c. 120  
b. 50 d. 81

69) 30 is what percent of 150?

- a. 25% c. 20%

b. 30%

d. 40%

70) 30 is 45% of what?

a. 60

c. 66.7

b. 55

d. 55.7

71) What is 325% written as a decimal?

a. 32.5

c. 3.25

b. .325

d. 325

72) What is 33% written as a fraction?

a.  $\frac{33}{10}$

c.  $\frac{33}{100}$

b.  $\frac{3}{10}$

d.  $\frac{33}{1000}$

**Use the following data set to answer all questions below:** 12, 15, 10, 9, 12, 12, 9, 16, 17

73) What is the range?

a. 5

c. 29

b. 8

d. 10

74) What is the mean? (rounded to the nearest whole number)

a. 13

c. 12

b. 14

d. 15

75) What is the median?

a. 12

c. 10

b. 9

d. 15

76) What is the  $q_1$ ?

a. 9.5

c. 9

b. 9

d. 11

77) What is  $q_3$ ?

a. 15

c. 15.5

b. 9.5

d. 10

78) What is the IQR?

a. 5

c. 6

b. 7

d. 8

79) What is the absolute deviation? (rounded)

a. 0, 0, 0, 2, 3, 3, 3, 4, 5

b. 0, 0, 2, 2, 3, 3, 4, 5, 5

c. 1, 1, 1, 3, 4, 5, 5, 5, 5

d. 2, 3, 4, 4, 5, 2, 3, 2, 4

80) What is the mean absolute deviation rounded to the nearest whole number)

a. 2

c. 1

b. 3

d. 4

81) What does the first vertical line of the box in the box plot represent?

a. Min

c. Max

b. Q1

d. q3

82) What does the vertical line inside the box plot represent?

a. Q2

c. Median

b. None of the above

d. All of the above

**Have a wonderful summer! I look forward to seeing you  
all in September!**