

Name \_\_\_\_\_

Date \_\_\_\_\_

**Summer Work**

Absolute Value	Integers	Whole	Part	Percentage
Rational Number	Irrational Number	Reciprocal	Improper Fraction	Ratio
Proportion	Unit Rate	Rate	Constant of Proportionality	Equivalent

Principal	Expression	Equation	Inequality	Open Point	Closed Point
Solution Set	Terms	Like Terms	Inverse Operations	Interest	Mean
Median	Mode	IQR	Experimental Probability	Theoretical Probability	Range
Representative Sample	Population	Compound Probability	Independent Event	Dependent Event	Frequency

- 1) Is always positive because it is a measurement of distance: \_\_\_\_\_
- 2) A decimal that does not repeat or terminate: \_\_\_\_\_
- 3) A decimal that repeats, terminates, and can be written as a fraction: \_\_\_\_\_
- 4) A comparison of two ratios: \_\_\_\_\_
- 5) A comparison of two quantities: \_\_\_\_\_
- 6) A unit per one of another unit: \_\_\_\_\_
- 7) When the numerator and denominator swap places, forming a new fraction:  
\_\_\_\_\_
- 8) The multiple that relates the x and y values: \_\_\_\_\_
- 9) Same value, different form: \_\_\_\_\_
- 10) A ratio that is always out of 100: \_\_\_\_\_
- 11) The “is” number, which will be the numerator: \_\_\_\_\_
- 12) The “of” number, which will be the denominator: \_\_\_\_\_
- 13) Span from negative infinity to positive infinity: \_\_\_\_\_
- 14) A ratio between two quantities in different units: \_\_\_\_\_

- 15) When the numerator is bigger than the denominator, resulting in a value greater than one:  
\_\_\_\_\_
- 16) Your initial investment \_\_\_\_\_
- 17) Separated by a + or - sign \_\_\_\_\_
- 18) Have the same variable raised to the same power \_\_\_\_\_
- 19) The middle number in a data set \_\_\_\_\_
- 20) The average of the data set \_\_\_\_\_
- 21) The number with the highest frequency \_\_\_\_\_
- 22) The difference between the max and the min \_\_\_\_\_
- 23) The difference between between  $q_3$  and  $q_1$  \_\_\_\_\_
- 24) A smaller group of people that accurately represents the population \_\_\_\_\_
- 25) The entire group of people from which a sample is chosen \_\_\_\_\_
- 26) Probability that is based solely on how many desirable choices there are vs how many possible choices there are. "It is what it is." \_\_\_\_\_
- 27) Probability based on actual trials \_\_\_\_\_
- 28) An event whose odds rely on another event \_\_\_\_\_
- 29) An event that does not rely on anything else \_\_\_\_\_
- 30) The set of numbers that make an inequality true \_\_\_\_\_
- 31) A mathematical "translation" of a real world scenario that can be evaluated \_\_\_\_\_
- 32) When two expressions are set equal to each other and can be solved \_\_\_\_\_
- 33) These result in a solution set that makes them true \_\_\_\_\_
- 34) These are used when the number is **not** included in the solution set \_\_\_\_\_
- 35) These are used when the number is included in the solution set \_\_\_\_\_
- 36) The opposite of the operation shown \_\_\_\_\_
- 37) The number of times something occurs \_\_\_\_\_
- 38) The amount of money you make on your investment after leaving it in the bank for some time \_\_\_\_\_
- 39) When two events occur, but are treated as one \_\_\_\_\_

40) What is the fraction equivalent to .017?

- a.  $17/100$
- c.  $17/1000$

- b.  $1\frac{7}{10}$
- d.  $1\frac{7}{100}$

41) What is the decimal equivalent of  $7/100$ ?

- a. .007
- c. .07

- b. .7
- d. 7.0

42) What is  $3\frac{3}{5} \times 4\frac{1}{9}$  written as a mixed number simplest form?

- a.  $74/5$
- c.  $14\frac{4}{5}$

- b.  $666/45$
- d. None

43) What is  $16/3 \div 4$  in simplest form?

- a.  $16/12$
- c.  $4/3$

- b.  $8/6$
- d.  $64/3$

44) What is  $-5 - 12$ ?

- a. 7
- b. -17

- c. -7
- d. 17

45) What is  $12 - (-5)$ ?

- a. 7
- b. -17

- c. -7
- d. 17

46) What is  $35 - 40$ ?

- a. 5
- b. 10

- c. -5
- d. -10

47) What is  $-13 + -15$ ?

- a. -2
- b. -28

- c. 2
- d. 28

48) What is  $-15 \times 3$ ?

- a. -45
- b. -5
- c. 45
- d. 5

49) What is  $-9 \times -4$ ?

- a. 36
- b. 45
- c. -36
- d. -45

50) If Nicole makes 36 chocolate covered strawberries and 12 vanilla cupcakes, what is the ratio, simplest form, of cupcakes to chocolate covered strawberries?

- a.  $12/36$
- b.  $\frac{1}{3}$
- c.  $2/6$
- d.  $3/9$

51) If Jacob drives 300 miles in 2 hours, how many miles would he drive in 6 hours?

- a. 600 miles
- b. 1,000 miles
- c. 800 miles
- d. 900 miles

52) Ethan has a treasure map. On it, 1.5 inches is equivalent to 40 miles in the real world. How many inches would 300 miles be?

- a. 8.5
- b. 10.75
- c. 11.25
- d. 115

53) If Chinny reads 792 books in 8 months, how many books does he read per month?

- a. 99
- b. 6,336
- c. .01
- d. 50

54) If Gemma's new car has a 15 gallon tank, and she can travel 500 miles before needing to refill her tank, how many miles per gallon does she get?

- a. 33.3
- b. 31
- c. 40
- d. .03

55) What is the absolute value of  $-|-67|$

- a. 67
- b. All of the above
- c. -67
- d. None of the above

56) What is the absolute value of  $|-98|$

- a. 98
- b. All of the above
- c. -98
- d. None of the above

57) What is 44% of 196?

- a. 86.24
- b. 22
- c. 4.45
- d. 80

58) 96 is what percent of 880?

- a. 30%
- b. 13%
- c. 10.9%
- d. 40%

59) 85 is 80% of what?

- a. 1,100
- b. 1,100.25
- c. 106.25
- d. 1,062.5

60) If there are 11 girls and 9 boys in the class, what is the ratio of boys to people in the class?

- a.  $11/9$
- b.  $9/20$
- c.  $9/11$
- d.  $20/9$

61) If there are 11 girls and 9 boys in the class, what percent of the class is boys?

- a. 50%
- b. 45%
- c. 55%
- d. 40%

62) Using the following ordered pairs, what is the constant of proportionality?  $(3,6)(4,8)(5,10)$

- a.  $\frac{1}{2}$
- b. 4
- c. 2
- d. 5

63) Solve the following equation:  $2(x + 5) = 28$

- a.  $x = 10$
- b.  $x = 11.5$
- c.  $x = 9$
- d. 12

64) Solve the following equation:  $x/10 - 6 = 40$

- a.  $x = 460$
- b.  $x = 45$
- c.  $x = 4600$
- d.  $x = 56$

65) What is the solution set of the following inequality?  $-3x - 5 < 10$

- a.  $\{-5, -4, -3, \dots\}$
- b.  $\{\dots, 3, 4, 5\}$
- c.  $\{-4, -3, -2, \dots\}$
- d.  $\{\dots, 2, 3, 4\}$

66) Solve the following equation  $3 + 5x = 28$

- a.  $x = 25$
- b.  $x = 15$
- c.  $x = 5$
- d.  $x = 10$

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

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

68) 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
- b. Closed/Left
- c. Open/Right
- d. Closed/Right

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

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

70) If I assume Chippy has 45 hats, but he actually has 54 hats, what is my percent error?

- a. 9%
- b. 15.3%
- c. 16.7%
- d. 18.9%

71) If Timmy had 34 pairs of Jordans last year, but gave some away and now only has 22 pairs, what is the percent change?

- a. 35.3%
- b. 39.7%
- c. 32.1
- d. 30%

72) If Nico0ole found a shirt that costs 30 dollars with a sales tax of 8%, how much is the actual price of the shirt?

- a. \$2.40
- b. \$27.60\$
- c. \$32.40
- d. None

73) If Siby goes to a restaurant and racks up a \$150 meal, but uses a coupon that takes 25% off, what is the actual price of her meal?

- a. \$12.50
- b. \$162.50
- c. \$137.50
- d. None

74) If Jacob invests \$3,000 into a savings account with an annual simple rate of 6% interest, how long would he have to leave his money in the bank in order to make an interest of 1,800 dollars?

- a. 5 years
- b. 10 years
- c. 8 years
- d. 100 years

75) If Tone invests \$5,000 into a bank account with an annual interest rate of 5% for 15 years, how much money would he have in total after 15 years?

- a. \$3,750
- b. \$5,000
- c. \$8,750
- d. None

76) Gemma made \$10,000 on the money she deposited into the bank **two years ago**. If the interest rate is 5%, how much money did she initially invest?

- a. \$10,000
- b. \$100,000
- c. \$1,000
- d. \$1,000,000

77) Fernanda has some amount of pencils, and Alexandra has three times as many pencils as Fernanda. Which expression would represent the sum of their number of pencils?

- a.  $3x$
- b.  $3x + x$
- c.  $x + x$
- d.  $x + y$

78) If Kira rolls a die 45 times, what is the theoretical probability of her rolling a number larger than 4?

- a. 90
- b.  $\frac{1}{3}$
- c.  $\frac{1}{6}$
- d.  $\frac{5}{6}$

79) There are 5 types of paper in a bag: 30 blue, 20 white, 25 black, 40 red, and 50 green. What is the probability of Adrienne picking a white piece of paper, throwing it out, and then picking another white piece of paper?

- a. 1.4%
- b. 14%
- c. .02%
- d. 20%

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

80) What is the range?

- a. 5
- b. 8
- c. 29
- d. 10

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

- a. 13
- b. 14
- c. 12
- d. 15

82) What is the median?

- a. 12
- b. 9
- c. 10
- d. 15

83) What is the q1?

- a. 9.5
- b. 9
- c. 9
- d. 11

84) What is q3?

- a. 15
- b. 9.5
- c. 15.5
- d. 10

85) What is the IQR?

- a. 5
- b. 7
- c. 6
- d. 8

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

- a. Min
- b. Q1
- c. Max
- d. q3

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

- a. Q2
- b. None of the above
- c. Median
- d. All of the above

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