



SAINT JAMES ELEMENTARY SCHOOL

SUMMER MATHEMATICS PACKET

FOR STUDENTS ENTERING

7TH GRADE

Student's Name: _____

Message to Parents:

The mathematics teachers want all students to be as successful as possible in their middle school math program. This math packet has been designed so that students will maintain and review their math skills during the summer

The packet will be collected on the first day of school, Tuesday, September 3rd. All students are required to complete this packet

To receive credit for this packet, all of the problems must be completed and **ALL SUPPORTING WORK MUST BE SHOWN!**

*Please sign below to verify that your child has completed the packet and all supporting work is shown.

Parent/Guardian's signature: _____

1. Annie and Bernie built a maze for their hamsters. Annie's hamster completed the maze 7 seconds less than twice the time it took Bernie's hamster to complete the maze. If Bernie's hamster completed the maze in b seconds, which expression represents the time, in seconds, it took Annie's hamster to complete the maze?

A. $7 - 2b$

C. $2b + 7$

B. $2b - 7$

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

2. A concession stand at a baseball field pays \$0.05 for each packet of mustard. How much will the concession stand pay for 7,000 packets of mustard? .

3. On his whiteboard, Jamal correctly wrote a mixed number in lowest terms that was equivalent to 3.35. What number did Jamal write on his whiteboard?

A. $\frac{3}{5}$

C. $\frac{32}{20}$

B. 53

D. $\frac{335}{100}$

4. Which of the following is NOT equivalent to $\frac{8}{10}$

A. 8%

B. 80%

C. $\frac{80}{100}$

D. 0.8

5. The steps Laura used to solve an equation are shown below. What should Laura change in order to solve the equation correctly?

$$\begin{aligned}60 &= 6x - 34 \\ \frac{60}{6} &= \frac{6x}{6} - 34 \\ 10 &= x - 34 \\ 10 + 34 &= x - 34 + 34 \\ 44 &= x\end{aligned}$$

- A. Subtract 60 from both sides before dividing by 6.
B. Add 34 to both sides before dividing by 6.
C. Subtract 34 from both sides before dividing by 6.
D. Rewrite the equation as $6x = 60 - 34$.
6. Four customers at a deli each bought a different item. Each item had a different price per pound. The amount of the item each person bought and the total amount each person paid are shown below.

Francesca: 0.7 pound for \$11.19

Gail: $\frac{1}{2}$ pound for \$12.00

Henry: 0.62 pound for \$10.75

Isaac: $1\frac{1}{4}$ pounds for \$20.63

Which customer bought the item that had the lowest price per pound?

- F. Francesca
G. Gail
H. Henry
I. Isaac

7. Simone has \$40 to buy baseballs for her team's practice. Each baseball costs \$3. Which inequality represents this situation?

A. $3b < 40$

C. $3b < 39$

B. $3b > 40$

D. $3b > 39$

8. Which inequality represents the solution to the inequality below?

$$26 < 6a$$

F. $a < 20$

H. $a < 4\frac{1}{3}$

G. $a > 20$

I. $a > 4\frac{1}{3}$

9. **SHORT RESPONSE** For each expression, explain how to use the properties of addition and multiplication to simplify the expression with the easiest computation possible. Show your work and name the properties you used.

Part A $47 \times 38 + 47 \times 62$

Part B $752 + (467 + 248)$

13. Convert

269 in = _____ ft _____ in

6 ft 6 in = _____ in

13 ft 10 in = _____ in

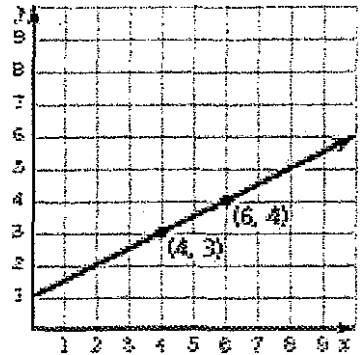
13. Which equation represents the line in the graph below?

F. $y = 4x - 3$

H. $y = \frac{1}{2}x + 1$

G. $y = 2x + 1$

I. $y = \frac{1}{2}x - 1$



14. EXTENDED RESPONSE The manager of an appliance store has 6 washing machines for sale. The prices of the six machines are shown in the box below.

\$450, \$400, \$450, \$599, \$675, \$500

The manager decides to also sell a seventh washing machine that has many additional features. The price of this machine is **greater than** \$1000. Describe how each of the following measures will change when the price of the seventh washing machine is included with the prices of the 6 original machines.

Part A the mean mean _____

Part B the mode mode _____

Part C the range range _____

Part D the median median _____

Copy and complete the statement using the specified property.

15. Commutative Property of Addition: $h + 11 =$ _____

16. Commutative Property of multiplication: $12 \cdot k =$ _____

17. Associative Property of Addition: $21 + (9 + 8) =$ _____

18. Associative Property of multiplication: $12 \cdot (5 \cdot 4)$ _____

19. Multiplication Property of One: $18 \cdot w \cdot 1 =$ _____

20. Addition Property of Zero: $26 + c + 0 =$ _____

Use the distributive property to simplify the expression.

21. $8(a + 6)$

22. $7(p - 5)$

23. $10(9 + x)$

24. $6(2 + a + 9)$

Simplify the expression. Identify the properties used.

25. $4(x - 3)$

26. $(3 \cdot x) \cdot 7$

27. Tickets to a basketball game cost \$4 for adults and \$2 for children. Write an expression that gives the total cost for a adults and c children to attend the game. What is the total cost for a family of 2 adults and 3 children to attend the game?

Perform the indicated operation.

28. $\frac{7}{9} \times \frac{6}{5}$

29. 2.35×4

30. $3 \frac{1}{8} \times 2 \frac{4}{9}$

31. $.035 \times 1.2$

32. $\frac{3}{5} - \frac{1}{6}$

33. $2 \frac{1}{7} + \frac{3}{6}$

34. $3.6 + 3$

35. $(0.25)7.38$

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

36. 0.6

37. 3.36

38. 0.325

Write the fraction as a decimal.

39. $\frac{3}{5}$

40. $\frac{3}{8}$

41. $\frac{31}{25}$

42. A recipe for a batch of 3 dozen chocolate chip cookies calls for 3 cups of flour, 1 cup of sugar, and 2 cups of chocolate chips. How much of each ingredient should be used to make 2 dozen cookies?

Write the fraction or decimal as a percent.

43. $\frac{3}{8}$

44. 0.76

45. 6.5

46. 3.25

47. $\frac{2}{4}$

48. 1.26

49. Chris, Mary Beth, and Allison are discussing the number of oranges grown in Florida. Chris says that approximately 14.6% of the world's oranges are grown in Florida, Mary Beth says that 292 out of every 2000 oranges are grown in Florida, and Allison says that 0.146 of the world's oranges are grown in Florida. Who is correct? **Explain** your reasoning.

50. A pizza shop offers 30% off the price of a large pizza every Tuesday night. If the regular price is \$25, what is the discounted price?

52. You run 6 miles in 1 hour. At this rate, how long will it take you to run a marathon (approximately 26 miles)?

53. What are the mean, median, mode, and range for the data?

3, 8, 6, 6, 6, 4, 9, 9, 12

Mean (average)

Median (middle number in order)

Mode (most often)

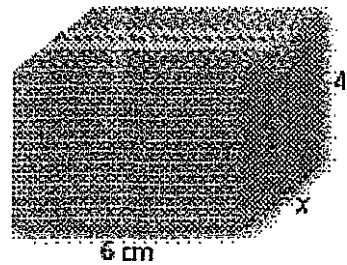
Range (highest -lowest)

54. Katie makes 70% of her shots from the free-throw line. Can you determine how many consecutive free-throws she must make in order to increase her percentage to 75%? **Explain.**

55. A fanner builds a fence to enclose a rectangular pasture. He uses 160 feet of fence. Find the total area of the pasture if it is 50 feet long. $A = bh$

56. Write and solve an equation to find the width of the box if its volume is 96 cubic centimeters.

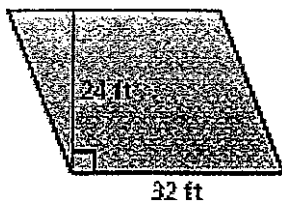
$$V = lwh$$



Use a formula to find the area of the figure.

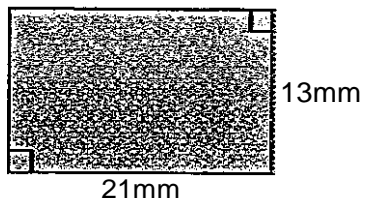
57.

$$A = b \times h$$



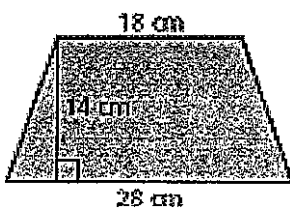
58.

$$A = b \times h$$



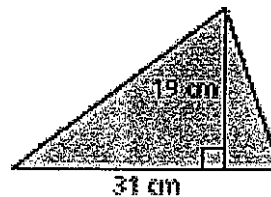
59.

$$A = \frac{(b_1 + b_2) \times h}{2}$$



60.

$$A = \frac{b \times h}{2}$$



Solve the equation.

61. $2s + 3 = 14s$

62. $c + 4c = 15$

Write the phrase as an expression.

62. A number m is at least -3.

63. 7 less than 3 times a number m

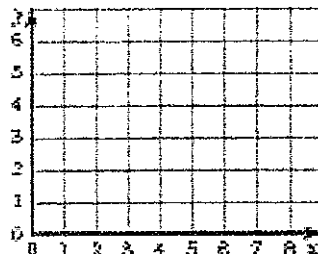
Write the word sentence as an inequality.

64. A number that is less than 7.

65. One cell phone plan costs \$15 per month plus \$0.10 per minute used. A second cell phone plan costs \$50 per month for unlimited use. **Write and solve** an inequality to find when the second plan is cheaper than the first.

66. Draw a mapping diagram of the set of ordered pairs.

$(2, 3), (3, 5), (4, 1), (5, 2)$

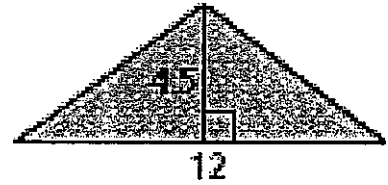


Simplify the expression. Identify the properties used.

67. $4(x + 3)$

68. $(3 \cdot X) \cdot 7$

69. Use a formula $\mathbf{b \times h \div 2}$ to find the area of the figure.



70. Tickets to a basketball game cost \$3.50 for adults and \$2 for children. Write an expression that gives the total cost for A adults and C children to attend the game. What is the total cost for a family of 2 adults and 3 children to attend the game?

71. You and three of your friends go parasailing for \$128.40. You split the cost evenly. How much does each person pay?

72. The yearly precipitation of Key West, Florida is 38.94 inches. About how much precipitation falls each month?

Write the fraction or decimal as a percent.

73. $\frac{5}{8}$

74. 0.04

75. 2.12

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

77. Chris, Mary Beth, and Allison are discussing the number of oranges grown in Florida. Chris says that approximately 14.6% of the world's oranges are grown in Florida, Mary Beth says that 292 out of every 2000 oranges are grown in Florida, and Allison says that 0.146 of the world's oranges are grown in Florida. Who is correct? **Explain** your reasoning.

78. A pizza shop offers 30% off the price of a large pizza every Tuesday night. If the regular price is \$25.50, what is the discounted price?

79. A farmer builds a fence to enclose a rectangular pasture. He uses 155 feet of fence. Find the total area of the pasture if it is 45.5 feet long.

Tell whether the ordered pair is a solution of the equation.

80. $y = x + 5$ (2, 7)

81. $y = 9x$ (3, 12)

82. $y = 2x + 3$ (4, 12)

83. $y = \frac{x}{-4}$ (8, 0)