Name:_____ Class:_____ Date:_____

6^{th} Grade to 7^{th} Grade Summer Math Packet

For this Math packet please show as much work as you can. The concepts you are going to be working on are those of the Common Core Standards for 6^{th} Grade that was taught this year. The purpose of this packet is for review and retention. If you forget how to do a problem or get stuck on on please give it you r best try. Mr. Cotter will use your packet as a guide to help you in the 7^{th} grade. These packets need to be returned to Mr. Cotter on the first day of 7^{th} grade. You will receive points for this packet.

THANKS AND HAVE A GREAT SUMMER!

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Indicate the answer choice that best completes the statement or answers the question.

1. Which of the following inequalities is graphed on the number line?

a. $x > 4$ b. $x \geq 4$

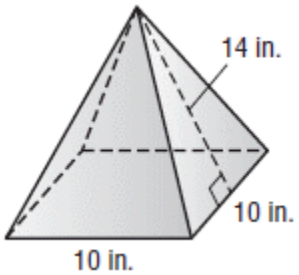
c. $x \leq 4$ d. $x < 4$

2. A muffin recipe calls for a ratio of 5 cups of flour to 2 cups of sugar. For each cup of sugar that is used, how many cups of flour are needed?

a. $\frac{5}{2}$ cups of flour b. $\frac{5}{7}$ cups of flour

c. $\frac{2}{5}$ cups of flour d. $\frac{2}{7}$ cups of flour

3. What is the surface area of a square pyramid with base side lengths of 10 inches and a slant height of 14 inches



a. $220\ \text{in}^2$ b. $280\ \text{in}^2$

c. $380\ \text{in}^2$ d. $660\ \text{in}^2$

4. There are 65 people watching a movie at a theater. If 40% of the customers purchased refreshments for the movie, how many customers purchased refreshments?

a. 26 customers b. 34 customers

c. 39 customers d. 163 customers

5. Marcus needs to earn a grade *higher than* 88 on his final quiz in order to have an A average. Which inequality best represents this situation?

a. $g \geq 88$ b. $g > 88$

c. $g < 88$ d. $g \leq 88$

6. Which property is represented by the equation shown below?

$6 \times 3 = 3 \times 6$

a. Multiplicative Inverse Property

b. Multiplicative Identity Property

c. Associative Property of Multiplication

d. Commutative Property of Multiplication

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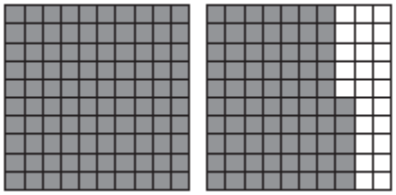
7. What percent is represented by the model?



a. 175% b. 125%
c. 75% d. 25%

8. Pamela is the leading server on her volleyball team. On average, she serves an ace 44% of the time. If she attempts 25 serves in her next game, how many aces would you expect her to have?

a. 57 aces b. 19 aces
c. 11 aces d. 8 aces

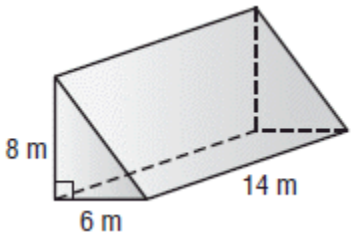
9. Which type of data display would be best for showing how data change over time?

a. box plot b. histogram
c. line graph d. line plot

10. Albert purchased 2.4 pounds of mixed nuts for $4.79 per pound. How much did he spend in all, to the nearest cent?

a. $12.43 b. $11.50
c. $6.71 d. $1.99

11. What is the volume of the triangular prism?



a. 336 cubic meters b. 384 cubic meters
c. 672 cubic meters d. 724 cubic meters

12. What is the missing rule in the function table?

x	?
2	7
3	8
6	11
9	14
12	17

a. $\frac{x}{-4}$ b. $x + 5$
c. $-4x$ d. $x - 3$

13. Mr. Addison is building a sandbox shaped like a rectangular prism. The sandbox is 8 feet long, 6 feet wide, and 1.5 feet deep. How many cubic feet of sand will the sandbox hold?

a. 15.5 cubic feet b. 72 cubic feet

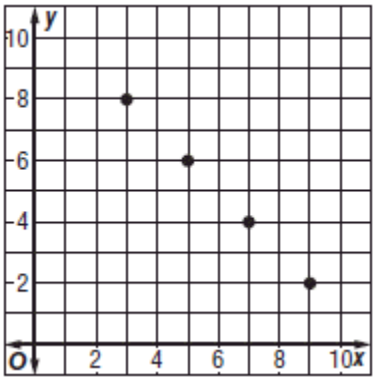
c. 105 cubic feet d. 138 cubic feet

14. A carpenter makes 4 table legs for each table that he builds. Which equation represents the relationship between the number of tables built t and the number of legs made l?

a. $l = 4t$ b. $t = 4l$

c. $l = t + 4$ d. $t = l + 4$

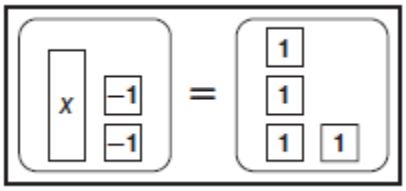
15. Which of the following equations represents the function graphed on the coordinate plane?



a. $y = x + 5$ b. $y = x + 1$

c. $y = 11 + x$ d. $y = 11 - x$

16. The algebra mat below models the equation $x - 2 = 4$.



What is the solution to the equation?

a. 6 b. 2

c. -2 d. -8

17. The table shows the number of points Anna scored this season. Find the mean number of points Anna scored.

Points Scored			
12	7	9	10
16	6	8	15
12	11	12	14

a. 9 points b. 10 points

c. 11 points d. 12 points

18. Julio is evaluating the expression below.

$6 + 2(9 - 4) - 3 \times 5$

Which operation should be performed first according to the order of operations?

a. Add 6 and 2. b. Multiply 2 by 9.

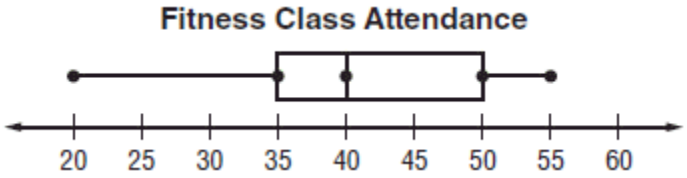
c. Subtract 4 from 9. d. Multiply 3 by 5.

19. Which of the following represents the decimal 0.32 written as a fraction in simplest form?

a. $\frac{32}{100}$ b. $\frac{16}{50}$

c. $\frac{17}{50}$ d. $\frac{8}{25}$

20. The box plot shows the daily attendance at a fitness class.

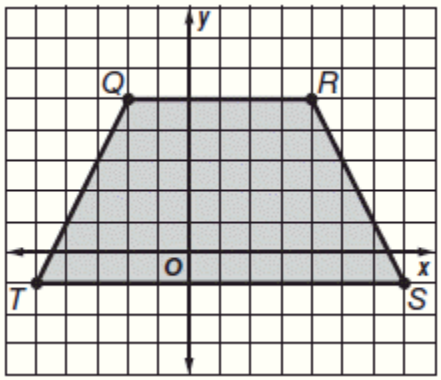


What is the median of the data?

a. 55 b. 40

c. 35 d. 20

21. What is the area of trapezoid *QRST*?



a. 54 square units b. 68 square units

c. 76 square units d. 108 square units

22. The table below shows the type and number of vehicles in a parking lot.

Types of Cars	
Minivans	12
Sedan	28
SUV	9
Trucks	5

What is the ratio of sedans to minivans in simplest form?

a. 7 to 3 b. 3 to 7

c. 7 to 10 d. 10 to 3

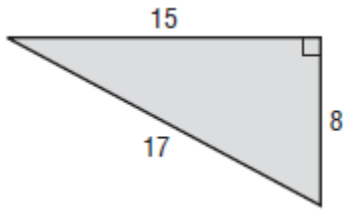
23. Which of the following properties would you use to solve the equation?

$r + 4 = 11$

a. Addition Property of Equality b. Division Property of Equality

c. Multiplication Property of Equality d. Subtraction Property of Equality

24. What is the area of the triangle?



a. 120 square units b. 75 square units

c. 60 square units d. 40 square units

25. The list below shows the number of books read by students in Abram's class over the summer. What is the mode of the data?

3, 6, 12, 4, 3, 5, 4, 8, 4, 10, 4, 8, 7, 5, 7

a. 4 books b. 5 books

c. 7 books d. 9 books

26. Which of the following coordinate pairs corresponds to point *A*?

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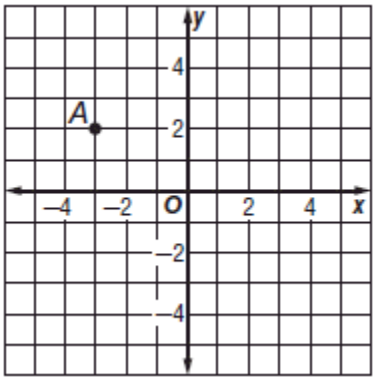


a. (2, −3) b. (3, −2)
c. (−2, 3) d. (−3, 2)

27. The Pirates football team has played 75% of its games so far this season. If the team has played 9 games, how many games are there in the season?

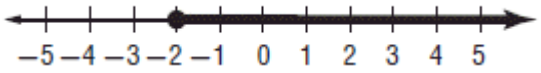
a. 7 games b. 11 games
c. 12 games d. 15 games

28. Which of the following best describes the center of a data set if there are outliers in the data but no big gaps in the middle of the data?

a. mean b. median
c. mode d. range

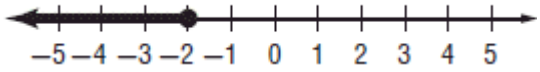
29. Which number line shows the solution to the inequality $x + 3 \leq 1$?

a.

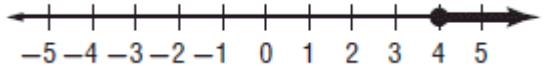


b.

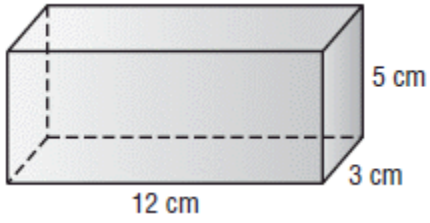
c.



d.



30. What is the volume of the rectangular prism shown below?



a. 20 cm^3 b. 75 cm^3

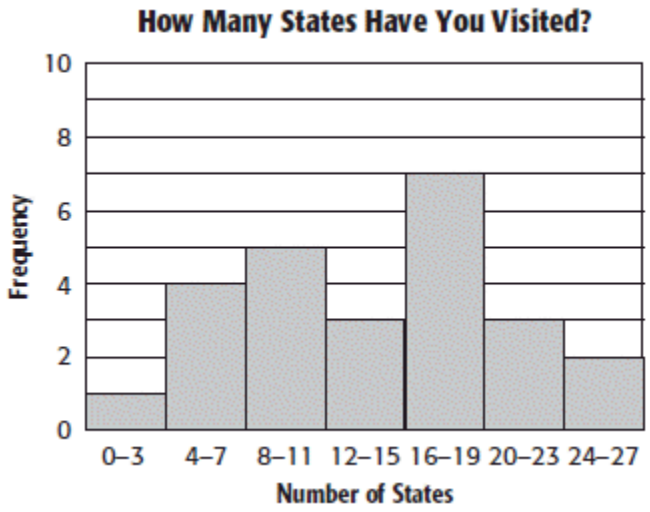
c. $180\ cm^3$ d. $222\ cm^3$

31. Which of the following integers has the least absolute value?

a. -3 b. 4

c. 8 d. -12

32. Kylie surveyed several classmates about the number of states they have visited. The results are shown in the histogram.



How many of Kylie's classmates have visited more than 15 states?

a. 3 students b. 8 students

c. 12 students d. 15 students

33. What is the least common multiple of 8 and 14?

a. 56 b. 28

c. 4 d. 2

34. The ratio table shows the number of miles Karen can drive for 1, 2, 3, and 4 gallons of gasoline. Based on the table, how far would she be able to drive on 8 gallons of gasoline?

Gallons	1	2	3	4
Distance (mi)	30	60	90	120

a. 30 mi b. 150 mi

c. 210 mi d. 240 mi

35. The expression *rt* can be used to find the distance traveled by an object that has an average speed of *r* over time *t*. How many miles will a hot air balloon travel in 2.2 hours if it travels at an average speed of 12.5 miles per hour?

a. 30.1 miles b. 27.5 miles

c. 14.7 miles d. 5.7 miles

36. What is the surface area of the triangular prism?

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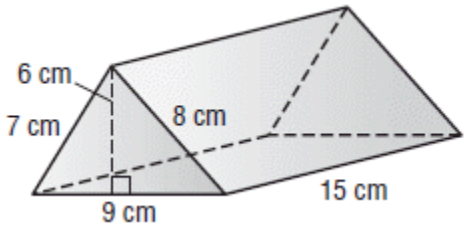


a. 468 square centimeters b. 414 square centimeters
c. 405 square centimeters d. 378 square centimeters

37. Which of the following symbols, when placed in the blank, makes the number sentence true?

$\frac{20}{75}$ _____ $0.\overline{26}$

a. + b. =
c. < d. >

38. What value of x results in a true number sentence in the equation shown?

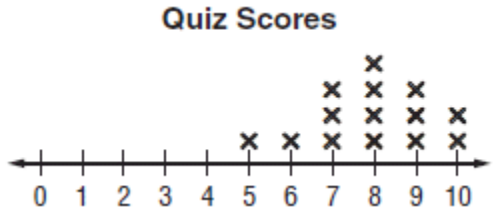
$2x = 16$

a. 32 b. 14
c. 8 d. 4

39. Which of the following expressions is equivalent to $3(4x + 1)$?

a. $7x + 4$ b. $x + 4$
c. $12x + 1$ d. $12x + 3$

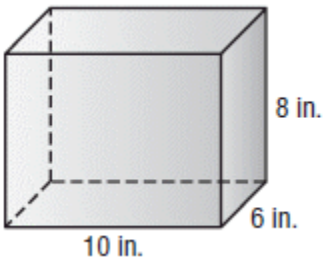
40. The line plot shows the quiz scores of several students.



What is the range of the quiz scores?

a. 4 points b. 5 points
c. 7 points d. 8 points

41. Adeline is wrapping a gift for her mother in a box with the dimensions shown.



What is the minimum amount of wrapping paper Adeline will need to completely cover the gift box?

a. 188 square inches b. 376 square inches

c. 424 square inches d. 488 square inches

42. Which of the following expressions correctly uses exponents to show the prime factorization of 168?

a. $2^4 \times 3 \times 7$ b. $2^3 \times 3^2 \times 7$

c. $2^4 \times 3^2 \times 7$ d. $2^3 \times 3 \times 7$

43. Which rule best describes the relationship shown in the function table below?

Input	Output
1	3
2	6
3	9
4	12
5	15

a. subtract 2 b. add 2

c. divide by 3 d. multiply by 3

44. Which of the following ratios is equivalent to $\frac{5}{8}$?

a. 16 : 10 b. 5 to 13

c. $\frac{25}{44}$ d. 15 out of 24

45. A pancake recipe calls for $\frac{1}{3}$ cup of mix for 4 pancakes. If Beth needs to make 60 pancakes, how many cups of pancake mix will she need?

a. 5 cups b. $4\frac{2}{3}$ cups

c. $3\frac{1}{3}$ cups d. $\frac{1}{5}$ cup

46. **SHORT ANSWER** Emily made 14 out of 19 shots during basketball practice. About what percent of her shots did she make? Explain your reasoning.

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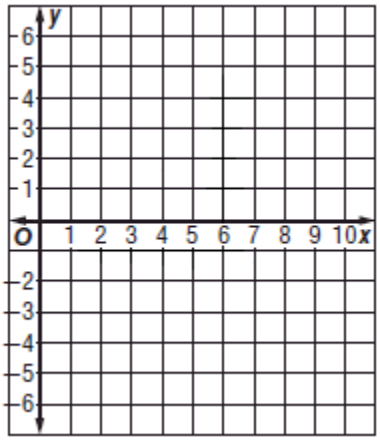
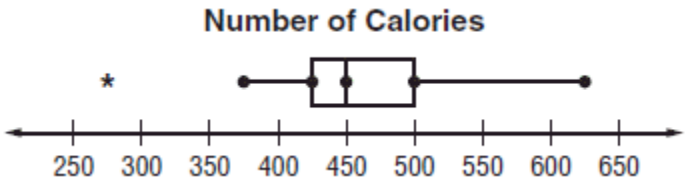
47. **SHORT ANSWER** Graph the figure with the vertices $A(2, -1)$, $B(6, -1)$, and $C(6, 4)$. Then classify the figure.



48. **SHORT ANSWER** The box plot below shows the number of Calories in different lunches at a restaurant. Describe the shape of the distribution using symmetry and outliers.



49. **SHORT ANSWER** Jeremy can purchase a 1.2-pound package of ground beef for $4.55 or a 1.6-pound package for $6.30. Which is the better buy? Explain your reasoning.

50. **SHORT ANSWER** The table below shows the number of canoes rented from Outdoor Adventures over the past four weekends.

Canoe Rentals			
21	32	17	24
15	30	28	26

Find the range, median, first quartile, third quartile, and interquartile range of the data.

51. **SHORT ANSWER** Define a variable and write an expression to represent the following phrase.

a number increased by 5

52. **SHORT ANSWER** The table below shows computer prices at an electronics store.

Computer Prices ($)			
950	620	545	810
775	1,120	905	775

Find the mean absolute deviation to the nearest cent. Explain what this value represents.

53. **SHORT ANSWER** The line graph shows the number of members during the first few months of a photography club. Describe the data. Then predict the number of members for the sixth month.

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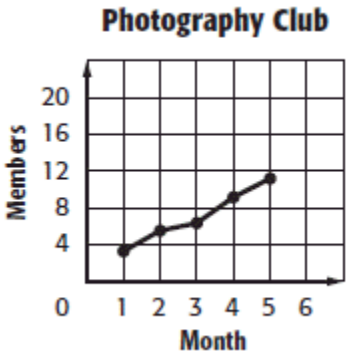

54. **SHORT ANSWER** Complete the function table.

Input (x)	Output ($3x - 1$)
1	
2	
3	
4	
5	

55. **SHORT ANSWER** Which measure of center would you use to describe the center of the data shown on the line plot? Explain your reasoning.