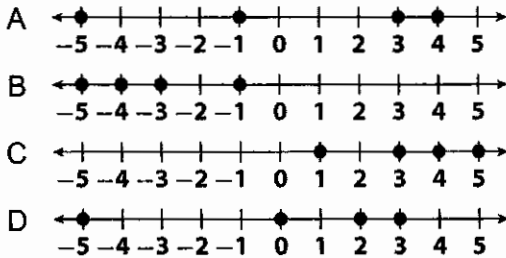


End-of-Year

10. Which number line shows the values of $|1|$, $|-3|$, $|-4|$ and $|5|$?



11. Susie divided a 9-pound bag of apples into 5 equal piles. How many pounds of apples are in each pile?

- A $\frac{1}{5}$ lb C $1\frac{4}{5}$ lb
 B $\frac{5}{9}$ lb D $1\frac{5}{4}$ lb

12. Stephen's glass holds 450 milliliters of milk. Farrah's glass holds $\frac{2}{5}$ as much milk. How much milk does Farrah's glass hold?

- A 90 mL C 225 mL
 B 180 mL D 360 mL

13. Which of the following expressions is equivalent to the expression below?

$$\frac{4}{7} \times \frac{5}{9}$$

- A $\frac{5}{9} \div \frac{4}{7}$ C $\frac{4}{9} \div \frac{5}{7}$
 B $\frac{4}{7} \div \frac{5}{9}$ D $\frac{4}{7} \div \frac{9}{5}$

14. Leah cut a $7\frac{1}{2}$ -inch piece of ribbon into pieces that are each $\frac{3}{4}$ of an inch long. How many pieces of ribbon did she cut?

- A 6 pieces C 10 pieces
 B 9 pieces D 15 pieces

15. Jonas is making a trail mix recipe that calls for $3\frac{1}{2}$ cups of nuts and $1\frac{1}{2}$ cups of raisins. Jonas mixes the nuts and raisins together. He will then divide the mixture into plastic bags containing $\frac{1}{4}$ cup of trail mix in each bag. How many plastic bags does Jonas need?

- A 1 C 20
 B 5 D 50

16. Serena has 6,783 seeds to plant in her vegetable garden. She will plant 119 seeds per row. How many rows of vegetables will she have?

- A 42 C 69
 B 57 D 73

17. Jinwon hit a golf ball 145.7 yards. Kayla hit a golf ball 122.95 yards. How much farther did Jinwon hit a golf ball?

- A 22.75 yards
 B 30.25 yards
 C 80.12 yards
 D 108.36 yards

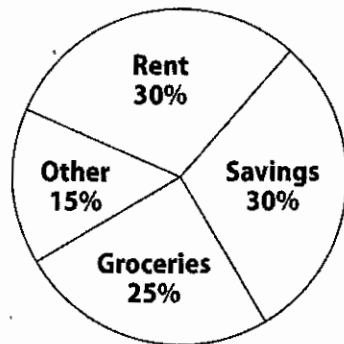
18. Gabriel drives 80 kilometers in one hour. If he drives at the same speed, how many kilometers can he drive in 3.75 hours?

- A 24.75 km C 80.75 km
 B 30 km D 300 km

End-of-Year

19. How many 0.4-liter glasses of water are contained in a 5.2-liter pitcher?
- A 1.3 glasses
 - B 13 glasses
 - C 13.4 glasses
 - D 52 glasses

20. Alissa's budget is shown in the circle graph below. Her total monthly budget is \$1,500. How much does Alissa spend on rent?



- A \$250
 - B \$300
 - C \$450
 - D \$500
21. In Evan's math class, there are 17 boys and 21 girls. Which of the following is the ratio of boys to girls in the class?
- A $\frac{17}{38}$
 - B $\frac{21}{38}$
 - C $\frac{17}{21}$
 - D $\frac{21}{17}$
22. Sara bought a 16-ounce jar of strawberry jam for \$3.20. What is the unit price?
- A \$0.02/oz
 - B \$0.50/oz
 - C \$0.20/oz
 - D \$5.00/oz

23. Zach is making a recipe that requires 1 cup of vinegar and 3 cups of water. Which of the following combinations shows the same ratio of vinegar to water?
- A 2 cups of vinegar to 3 cups of water
 - B 2 cups of vinegar to 6 cups of water
 - C 3 cups of vinegar to 1 cup of water
 - D 3 cups of vinegar to 6 cups of water

24. Liam bought 8 quarts of juice at the grocery. How many gallons of juice did he buy?

- A 1 gal
- B 2 gal
- C 3 gal
- D 4 gal

25. Delia measured her bathtub to be 2 meters long. Which of these is an equivalent measurement?

- A 0.4 miles
- B 3.5 yd
- C 8.2 ft
- D 78.7 in.

26. Nora bikes 30 miles per hour. Jiro bikes 45 miles per hour. Nora and Jiro each bike for 5 hours. How many more miles does Jiro bike?

- A 15 mi
- B 75 mi
- C 150 mi
- D 225 mi

27. The table below shows the number of books on shelves at a library. Which of the following represents the number of books?

Books	42	63	105	147
Shelves	2	3	5	7

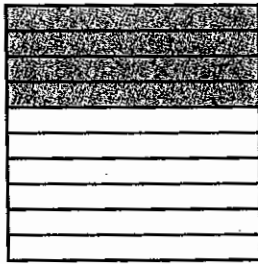
- A shelves \times 3
- B shelves \times 21
- C shelves + 28
- D shelves + 42

End-of-Year

28. On a certain map, 1.25 inches represents 20 miles. Longwood and Milltown are 5 inches apart on the map. What is the actual distance between Longwood and Milltown?

- A 20 mi C 80 mi
 B 25 mi D 100 mi

29. What percent of the rectangle below is shaded?



- A 20% C 40%
 B 30% D 80%

30. Which number is greater than the absolute value of $-\frac{5}{9}$?

- A -1 C 0.2
 B $-\frac{2}{3}$ D $\frac{4}{7}$

31. What are all the factors of 18?

- A 1, 2, 3, 6
 B 2, 3, 6, 9
 C 1, 2, 3, 6, 9
 D 1, 2, 3, 6, 9, 18

32. What is the value of the expression below?

$$205 - (7 - 2)^3 \div 5$$

- A 16 C 40
 B 36 D 180

33. Which of the following expressions is equivalent to the expression below?

$$2(7x + 3 - x)$$

- A $12x + 6$
 B $14x + 6$
 C $17x - 2$
 D $11x + 3$

34. Which is a solution of the equation below?

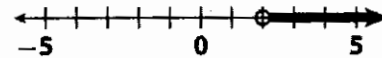
$$m - 9 = 4$$

- A $m = -5$ C $m = 5$
 B $m = -13$ D $m = 13$

35. A 60° angle is complementary to an angle that measures x° . Which of the following equations represents this situation?

- A $60 + x = 90$
 B $60 = x + 90$
 C $60 + x = 180$
 D $60 = x + 180$

36. Which inequality is shown on the number line below?



- A $p < 2$
 B $p \leq 2$
 C $p > 2$
 D $p \geq 2$

37. Write an algebraic expression for the phrase below.

12 less than twice a number n

- A $12 - n - n$ C $6 - 2n$
 B $2n - 12$ D $12n - 2$

End-of-Year Tests

38. Evaluate the expression below for $x = 4$.

$$6(x + 7)$$

- A 24
- B 31
- C 42
- D 66

39. Combine like terms to simplify the expression below.

$$14x - (2x - y) - y$$

- A $12x$
 - B $14x - y$
 - C $12x - y$
 - D $14x$
40. A high-school band has d drummers and 10 violinists. There are 2 more violinists than drummers. Which of the following equations represents the situation?
- A $d = 10 + 2$
 - B $d = 10 - 2$
 - C $d = 2 - 10$
 - D $d = 2 \times 10$
41. A student bought a book for \$7.50 and a pen. The total cost was \$9.50. Which of the following equations can be used to find the cost of the pen?

- A $p = 7.5b$
- B $p = 9.5b$
- C $9.50 + p = 7.50$
- D $7.50 + p = 9.50$

42. Which of the following is a solution to the equation below?

$$\frac{m}{3} = 15$$

- A $m = 5$
- B $m = 18$
- C $m = 30$
- D $m = 45$

Use the table for 43 and 44.

Auto Repair Charges

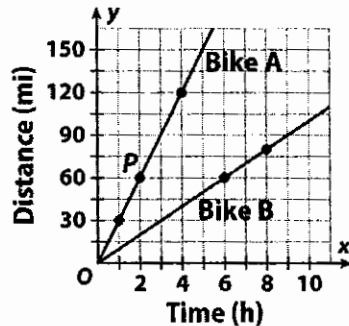
Hours, x	2	5	7
Charge, y (\$)	180	450	630

43. Which equation expresses y in terms of x ?
- A $y = 90x$
 - B $y = 180x$
 - C $x = 90y$
 - D $x = 2y$
44. What is the charge for a repair that takes 1.5 hours?
- A \$360
 - B \$270
 - C \$150
 - D \$135



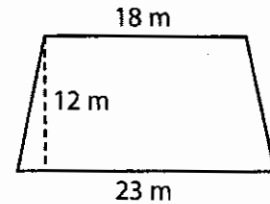
End-of-Year

Use the graph for 45–47.



45. What are the coordinates of point P ?
- A (2, 8) C (60, 2)
 B (2, 60) D (60, 8)
46. What is the dependent variable?
- A Bike A C time
 B Bike B D distance
47. Which equation represents Bike B?
- A $y = 6x$
 B $y = 10x$
 C $y = 60x$
 D $y = 80x$
48. A parallelogram has a base of 16 centimeters and a height of 4 centimeters. What is the area of the parallelogram?
- A 16 cm^2
 B 32 cm^2
 C 64 cm^2
 D 128 cm^2
49. A rectangular prism has a volume of 577.2 cubic feet. The prism is 5.2 feet long and 7.4 feet wide. What is the height of the prism?
- A 15 ft C 78 ft
 B 39 ft D 111 ft

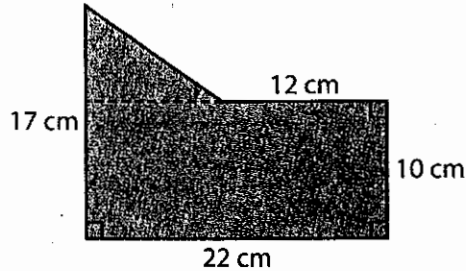
50. What is the area of the trapezoid below?



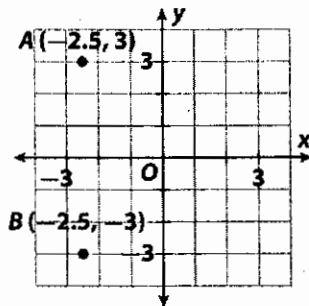
- A 216 m^2 C $2,484 \text{ m}^2$
 B 246 m^2 D $4,968 \text{ m}^2$
51. A right triangle has a height of 21 centimeters and a base of 11.6 centimeters. What is the area of the triangle?
- A 121.8 cm^2 C 487.2 cm^2
 B 243.6 cm^2 D $5,115.6 \text{ cm}^2$
52. What is the area of the rhombus shown below?
-
- A 3 in^2 C 208 in^2
 B 104 in^2 D 416 in^2
53. A triangle has an area of 221.16 square inches. The height of the triangle is 29.1 inches. What is the length of the base of the triangle?
- A 7.6 in.
 B 15.2 in.
 C 30.4 in.
 D 60.8 in.
54. A lawn in the shape of a trapezoid has an area of 1,833 square meters. The length of one base is 52 meters, and the length of the other base is 42 meters. What is the height of the trapezoid?
- A 35.25 m
 B 39 m
 C 43.6 m
 D 94 m

End-of-Year

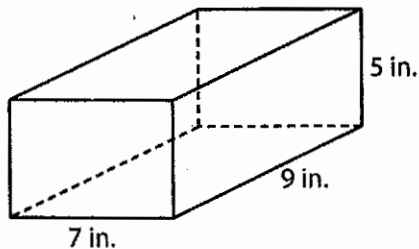
55. What is the area of the polygon shown below?



- A 112 cm² C 160 cm²
 B 136 cm² D 255 cm²
56. What is the distance between points A and B on the grid?



- A 3 units C 6 units
 B 4.5 units D 6.5 units
57. Charlene is wrapping the box below. How much wrapping paper will she need?

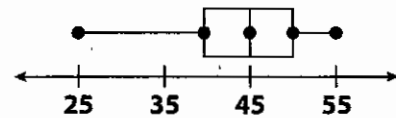


- A 90 in² C 178 in²
 B 153 in² D 286 in²

58. A swimming pool in the shape of a rectangular prism is 30 feet long, $15\frac{1}{2}$ feet wide, and 6 feet deep. How much water could the swimming pool hold?

- A 465 ft³ C 1,860 ft³
 B 930 ft³ D 2,790 ft³

59. What is the median of the data represented in the box plot below?



- A 25 C 45
 B 35 D 55
60. What is the range of the data represented in the dot plot below?



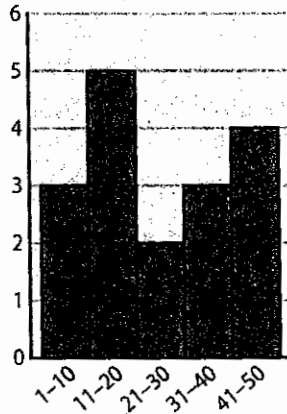
- A 0 C 2
 B 1 D 3
61. Sandra worked 6.2 hours on Wednesday, 5.5 hours on Thursday, and 3.5 hours on Friday. Which of the following is closest to the mean number of hours she worked over the three-day period?

- A 3 h C 5 h
 B 4 h D 6 h



End-of-Year Test

62. The histogram below shows the number of hours per month students in Mr. Carter's class watch television. How many students watch television between 11 and 20 hours per month?

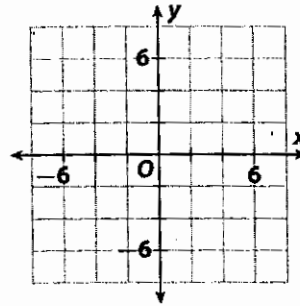


- A 2
 B 4
 C 5
 D 10
63. For 10 days in a row, Fiona and Gary timed how long they took to brush their teeth. Find the mean absolute deviation of each data set. Which person showed less variability in their teeth-brushing time?

Fiona's Time (seconds)
90, 85, 93, 97, 88, 91, 105, 98, 97, 96, 99, 98

Gary's Time (seconds)
75, 67, 115, 87, 46, 94, 65, 49, 87, 93, 55, 67

64. Toni is designing a rug using a coordinate plane. She uses polygon $ABCD$ with vertices $A(6, 2)$, $B(6, -2)$, $C(-2, -2)$, and $D(-2, 2)$. Each unit on the grid represents two feet. Plot the polygon on the grid below and find the area of the actual rug.



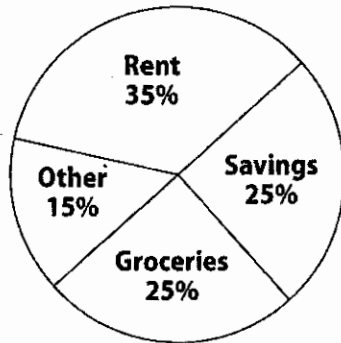
65. Ava's dog weighs 56 kilograms. Marty's dog weighs $\frac{7}{8}$ as much. How much does Marty's dog weigh?
-
66. Hayley cut a $10\frac{2}{3}$ -foot rope into pieces that are each $\frac{8}{9}$ of a foot long. How many pieces of rope did she cut?
-
67. A caterpillar crawls 25 inches in one minute. How far can it crawl in 4.5 minutes?
-

End-of-Year Test

68. Jungwon has \$41.25. Notepads cost \$3.75 each. How many notepads can Jungwon buy?

69. Noah bought 5 pounds of onions at \$2 per pound, a bag of salad greens for \$4, and 2 boxes of cereal for \$3 each. How much money did he spend?

70. Oliver's total monthly budget is shown in the circle graph below.



Oliver's monthly budget is \$2,500. How much money does he save each month?

71. Sara bought a 24-ounce can of tomato sauce for \$8.40. What is the unit price per ounce?

72. Conrad bought 2 gallons of bottled water at the supermarket. How many cups of water did he buy?

73. The table below shows the fees David charges for yard work.

Hours	2	4	6
Fee (\$)	70	140	210

How much money does David charge for yard work that takes 4.5 hours?

74. A falcon can fly at a speed of 87 kilometers per hour. A goose can fly at a speed of 78 kilometers per hour. Suppose a falcon and a goose each fly for 6 hours. How much farther will the falcon fly?

75. On a city map, 2.5 inches represents 5 miles. The library and the bank are 3 inches apart on the map. What is the actual distance between the library and the bank?

76. What is the value of the expression below?

$$(7)^3$$

77. Use the order of operations to simplify the expression below.

$$975 \div 3 - (12 - 9)^3$$

End-of-Year Test

78. Evaluate the expression below for $x = 15$.

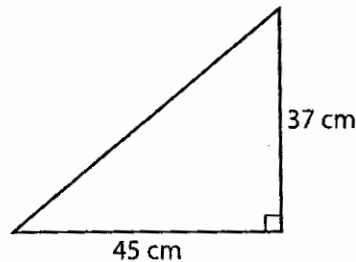
$$5(x + 7)$$

79. Last year, the tree in Pedro's front yard was 5.6 feet tall. This year, the tree is 2 feet less than the height of Pedro's house. Pedro's house is 17 feet tall. How tall is the tree?

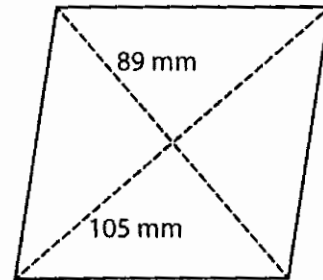
80. A parallelogram has a base of 45 meters and a height of 11 meters. What is the area of the parallelogram?

81. A rectangular prism has a volume of 711.68 cubic inches. The prism is 4 inches long and 12.8 inches wide. What is the height of the prism?

82. What is the area of the triangle shown below?



83. What is the area of the rhombus shown below?



84. A triangle has an area of 227.04 square inches. The length of the base of the triangle is 47.3 inches. What is the height of the triangle?

85. A field in the shape of a trapezoid has an area of 13,687.5 square yards. The length of one base is 150 yards, and the length of the other base is 215 yards. What is the height of the trapezoid?
