Summer HW Part II

Name: _____ **Date:** _____

1. Mary had 33 pennies in her pocket. She spent 25 of the pennies. Then she found 2 pennies and put them into her pocket. Which shows the number of pennies in Mary's pocket?

    A. $33 + 25 + 2$ B. $33 + 25 - 2$

    C. $33 - 25 - 2$ D. $33 - 25 + 2$

2. The temperature in Glendale was $72°F$ at 7:00 a.m. By noon, the temperature rose to $86°F$. Three hours later, the temperature rose another $13°F$. At 7:00 p.m. the temperature was $6°F$ more than it was at 7:00 a.m. Which expression can be used to find the temperature at 7:00 p.m.?

    A. $72 - 6$ B. $72 + 6$

    C. $86 - 13 + 6$ D. $86 + 13 - 6$

3. Which statement shows twice as much as 8?

    A. $2 + 8$ B. $2 - 8$ C. 2×8 D. $2 \div 8$

4. Martha had 6 plants in her front yard and 4 plants in her backyard. Which number sentence could be used to find out how many plants Martha had all together?

    A. $6 \times 4 =$ B. $6 - 4 =$

    C. $6 + 4 =$ D. $6 \div 4 =$

5. Anna bought 3 bags of red gumballs and 5 bags of white gumballs. Each bag of gumballs had 7 pieces in it. Which expression could Anna use to find the total number of gumballs she bought?

    A. $(7 \times 3) + 5 =$ B. $(7 \times 5) + 3 =$

    C. $7 \times (5 + 3) =$ D. $7 + (5 \times 3) =$

6. Daria needs to fill 4 gift baskets equally with bags of candy and boxes of cookies. She has 12 bags of candy and 8 boxes of cookies and wants to give all of them away.

    Which expression should be used to determine the total number of bags of candy and boxes of cookies she will place in each basket?

    A. $(12 + 8) \times 4$ B. $12 + (8 \div 4)$

    C. $(12 \div 4) + (8 \div 4)$ D. $(12 + 8) \div (8 + 12)$

7. The science center charges $8 to see its exhibits only and $14 to see its exhibits and watch a movie. On Monday 65 people paid to see the exhibits only, and 105 people paid to see the exhibits and watch the movie. Which expression could be used to find how much money the science center made on Monday?

A. $(8 \times 65) + (14 \times 105)$

B. $(8 + 65) \times (14 + 105)$

C. $(8 + 14) \times (65 + 105)$

D. $(8 \times 14) + (65 \times 105)$

8. Which of the following represents the statement "3 times the sum of 2 and 4"?

A. $3 \times 2 + 4$ B. $3 + (2 \times 4)$

C. $3 \times 4 + 2$ D. $3 \times (2 + 4)$

9. Which expression could be used to find the product of 38 and 24?

A. $(30 \times 20) + (8 \times 4)$

B. $(3 \times 2) \times (3 \times 4) \times (8 \times 2) \times (8 \times 4)$

C. $(30 \times 2) + (30 \times 4) + (8 \times 2) + (8 \times 4)$

D. $(30 \times 20) + (30 \times 4) + (8 \times 20) + (8 \times 4)$

10. What is the solution to the equation?

$$5 + 9 \times 21 =$$

A. 35   B. 66   C. 194   D. 294

11. What is the solution to the equation?

$$3 \times 10 + (9 \times 2) =$$

A. 48   B. 78   C. 84   D. 114

12. What is the simplified form of the expression below?

$$4 \times 5 + 2 \div 2$$

A. 11   B. 14   C. 21   D. 24

13. What is the value of the expression below?

$$(13 + 4) - (7 \times 2)$$

A. 20   B. 12   C. 10   D. 3

14. $(18 + 3) \div (3 - 2) =$

   A. 5   B. 17   C. 19   D. 21

15. $12 \div (4 + 2) =$

   A. 2   B. 3   C. 5   D. 6

16. What is the value of $6 \times (36 - 20)$?

   A. 16   B. 96   C. 196   D. 216

17. $3 \times (9 + 1) - 6 =$

   A. 12   B. 18   C. 22   D. 24

18. $8 + 8 \div 2 + 2 =$

   A. 4   B. 8   C. 10   D. 14

19. $54 - 36 \div 9 =$

   A. 50   B. 18   C. 4   D. 2

20. What is the value of this expression?

   $2 + 3 \times 6 - 7$

   A. 5   B. 13   C. 23   D. 37

21. Brett correctly found the value of the expression shown below.

   $5 + 4 \times (3 - 1) + 1$

   Which number represents the value Brett found for the expression?

   A. 14   B. 17   C. 19   D. 27

22. What is the value of the expression below?

   $4 \times (9 - 6)$

   A. 12   B. 15   C. 30   D. 60

23. What is the value of the expression below?

$5 \times (7 - 4)$

A. 15   B. 31   C. 39   D. 55

24. What is the value of the expression shown below?

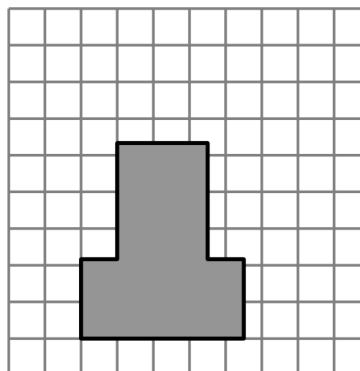$2 + 4 \times (3 + 7)$

A. 21   B. 25   C. 42   D. 60

25. Look at the figure below.

17 feet

15 feet
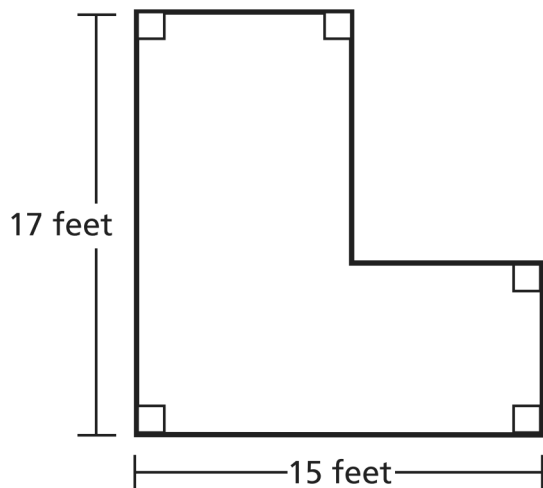
What is the perimeter, in feet, of the figure?
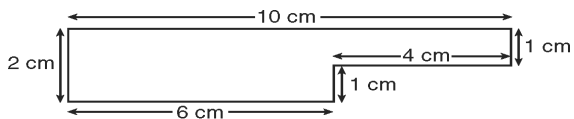
A. 32 feet   B. 64 feet

C. 96 feet   D. 128 feet

26. Which of the following is the *closest* to the perimeter of the shape?

⊢⊣ Represents 1 meter

A. 10 meters   B. 20 meters

C. 30 meters   D. 40 meters

27. Look at the polygon below.

10 cm
2 cm
4 cm
1 cm
1 cm
6 cm

1 centimeter = 1 cm

What is the perimeter of the polygon?
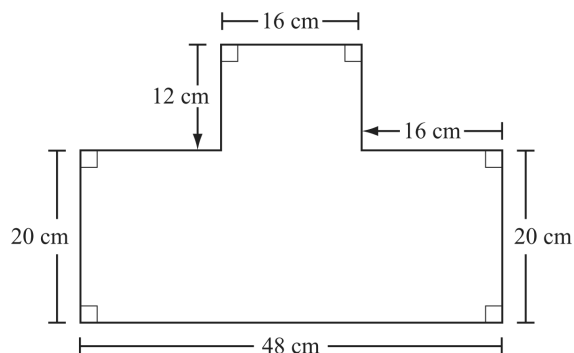
A. 16 cm   B. 20 cm   C. 24 cm   D. 28 cm

28. Given the information, how many units cover the shaded shape?

1 unit
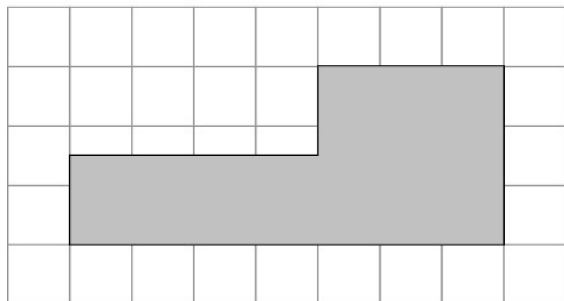
A. 15   B. 17   C. 23   D. 30

29. Jaden is installing fencing around his garden. A scale drawing of his garden is shown below.

⊢— 16 cm —⊣

12 cm

←— 16 cm —→

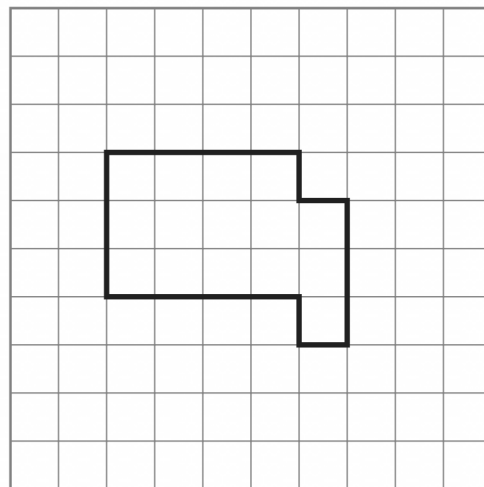20 cm   20 cm

⊢———— 48 cm ————⊣

Scale
4 centimeters : 3 meters

What is the minimum number of meters of fencing Jaden needs to go around his garden with no overlap?
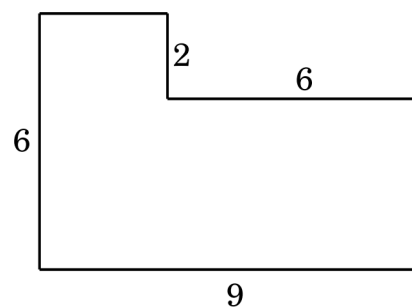
A. 120   B. 160   C. 213   D. 480

30. Mike wants to build a fence around his garden. The shape of Mike's garden is shown on the grid.

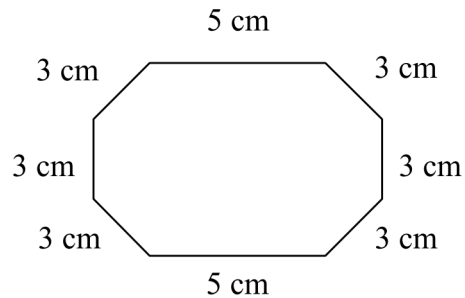What is the perimeter, in units, of Mike's garden?

A. 13 units   B. 15 units

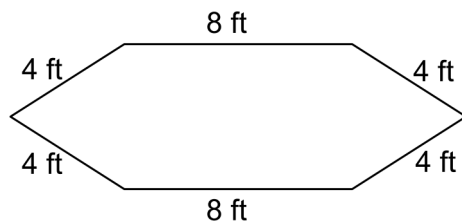C. 16 units   D. 18 units

31. What is the perimeter of this figure?

2

6

6

9

A. 23 units   B. 27 units

C. 30 units   D. 54 units

32. Which of the following could be used to determine the perimeter of shape below?

5 cm

3 cm   3 cm

3 cm   3 cm

3 cm   3 cm

5 cm

A. $3 + 5$

B. $3 \times +5$

C. $3 + 3 + 3 + 5$

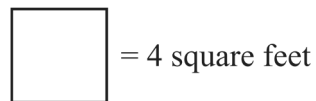D. $6 \times 3 + 2 \times 5$

33. Look at the diagram of Laura's yard.

8 ft

4 ft   4 ft

4 ft   4 ft

8 ft

Which expression can Laura use to find the perimeter of her yard?

A. $(4 \times 4) + (2 \times 8)$

B. $(4 \times 8) + (2 \times 8)$
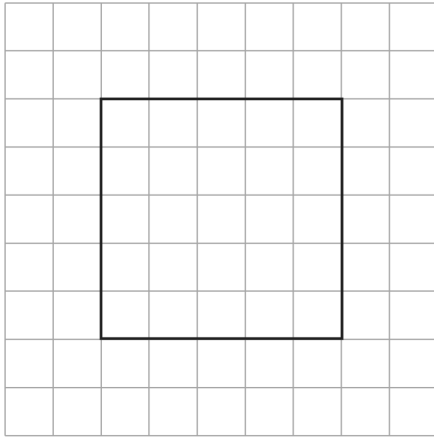
C. $(4 + 4) + (2 + 8)$

D. $(4 \times 8) + (2 \times 4)$

34. A school is planning to build the patio shown below.
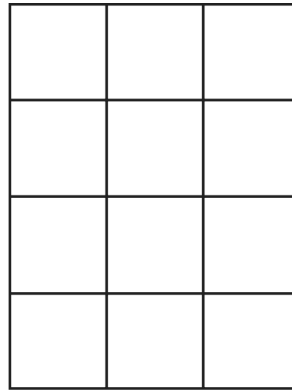
= 4 square feet

What is the area of the patio?

A. 12 square feet

B. 14 square feet

C. 28 square feet

D. 48 square feet

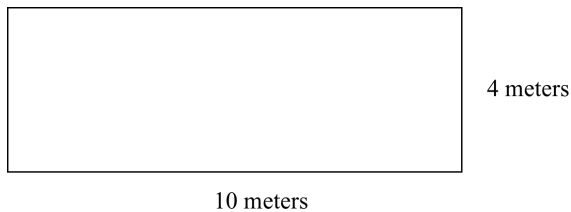35. An outline of a rug in Jordan's classroom is shown below.

☐ = 1 square foot
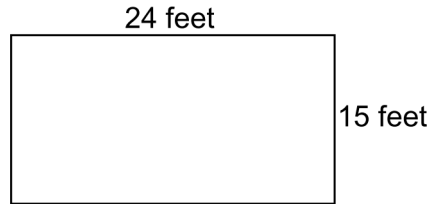
What is the area of the rug in square feet?

A. 10   B. 15   C. 20   D. 25

36. Which of the following is a true statement about the rectangle below?

4 meters

10 meters

A. Perimeter = 28 m²   B. Perimeter = 40 m

C. Area = 28 m   D. Area = 40 m²

37. The diagram below shows the length and width of the wall that Tara is going to cover with wallpaper.

24 feet

15 feet

What is the least amount of wall paper Tara will need to cover the entire area of the wall?

A. 39 square feet   B. 78 square feet

C. 350 square feet   D. 360 square feet

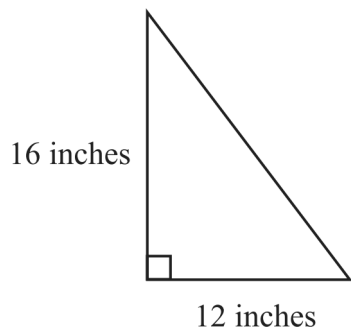38. A rectangle is 6 inches long and 4 inches wide. What is the area of the rectangle?
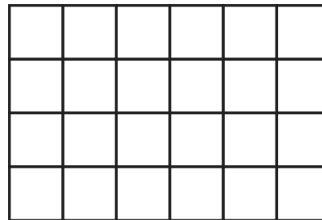
A. 24 square inches   B. 30 square inches

C. 74 square inches   D. 120 square inches

39. A rectangle has a length of $4\frac{1}{2}$ inches and a width of $2\frac{3}{4}$ inches.

What is the area of the rectangle, in square inches?

A. $12\frac{3}{8}$ B. $12\frac{1}{4}$ C. $6\frac{2}{3}$ D. $6\frac{3}{8}$
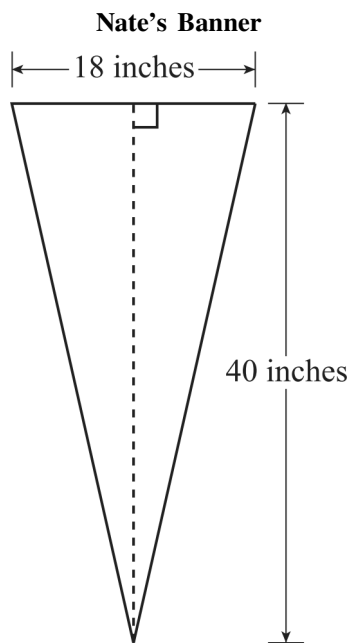
40. A triangle is shown below.

16 inches

12 inches

What is the area of the triangle in square inches?

A. 56   B. 96   C. 192   D. 384

41. A banner hanging on Nate's bedroom wall has the measurements shown below.

Nate's Banner

18 inches

40 inches

What is the area of Nate's banner?

A. 29 square inches   B. 360 square inches

C. 720 square inches   D. 1,440 square inches

42.

11

8

15
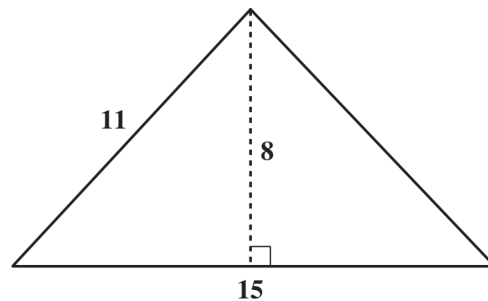
What is the area of the triangle shown above?

A. 44 square units   B. 60 square units

C. 88 square units   D. 120 square units

43. Use the triangle below to answer the following question.

15 ft.

18 ft.

What is the area of the triangle?

A. 24 ft.^{2} B. 48 ft.^{2}

C. 135 ft.^{2} D. 270 ft.^{2}

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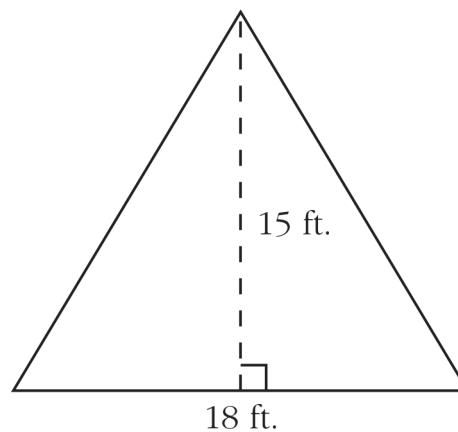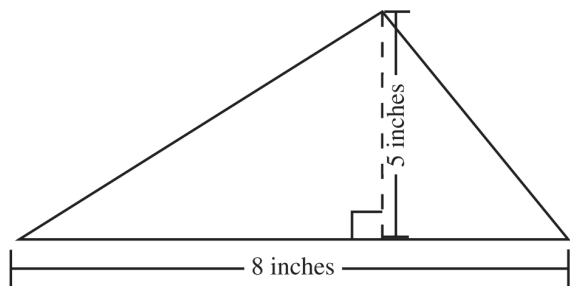

5 inches

8 inches

A. 10 square inches   B. 12.5 square inches

C. 20 square inches   D. 40 square inches

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

10 m

26 m
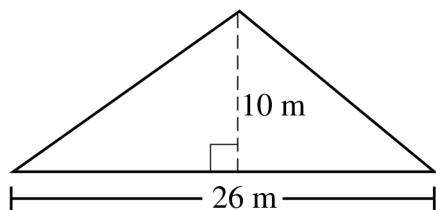
A. $260\,m^2$ B. $130\,m^2$

C. $65\,m^2$ D. $36\,m^2$

46. What is the area of the shaded figure on the grid below?
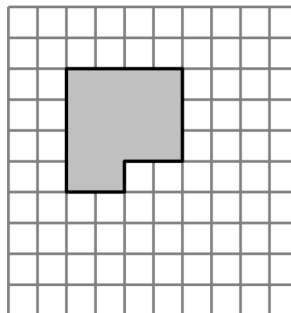
☐ is one square unit

A. 12 square units   B. 14 square units

C. 16 square units   D. 18 square units

47. What is the area of the shaded figure?

☐ represents 1 square unit

A. 20 square units   B. 22 square units

C. 26 square units   D. 28 square units

48. A diagram of Ryan's yard is shown.
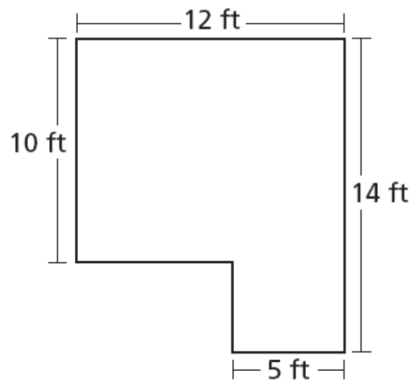
Which expression can Ryan use to find the total area of his yard?

A. $(10 + 4) \times (12 + 5)$ B. $(10 + 4) \times (12 - 5)$

C. $(12 \times 10) - (5 \times 4)$ D. $(12 \times 10) + (5 \times 4)$

49. A fish tank is shaped like the rectangular prism pictured below.
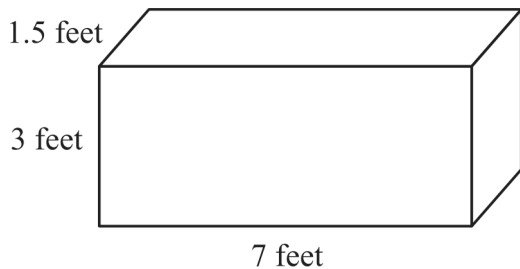
What is the volume of the fish tank in cubic feet?

A. 11.5   B. 13.5   C. 22.5   D. 31.5

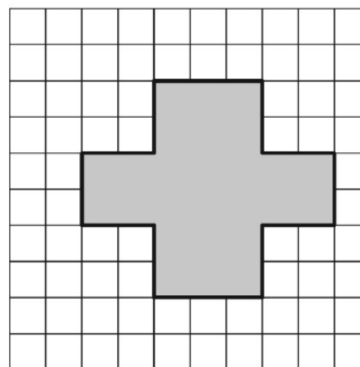50. A rectangular prism has the dimensions shown below.
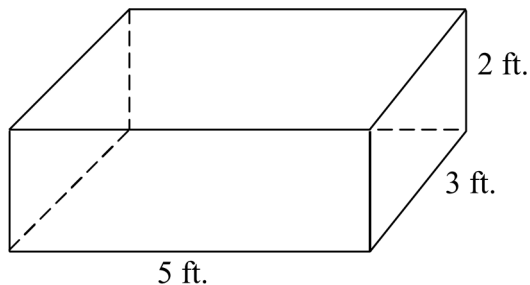
What is the volume of the prism?

A. $10\,\text{ft.}^2$ B. $10\,\text{cm.}^2$

C. $30\,\text{ft.}^3$ D. $30\,\text{cm.}^3$

51. What is the volume, in cubic feet, of the right rectangular prism below?
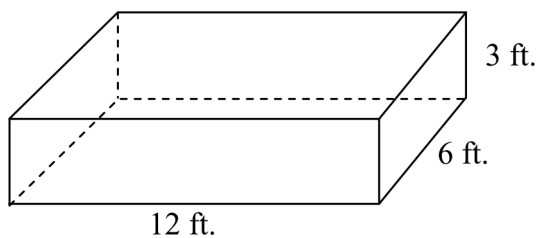
A. $216\,\text{ft.}^3$ B. $108\,\text{ft.}^3$

C. $54\,\text{ft.}^3$ D. $21\,\text{ft.}^3$

52.

9 in.

5 in.

15 in.
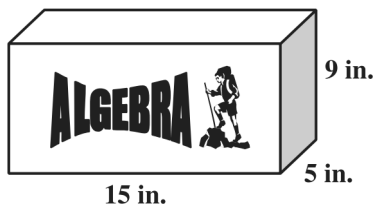
What is the volume of the shoebox shown above in cubic inches (in.^{3})?

A. 29   B. 75   C. 510   D. 675

53. $3 \times 3 \times 3 \times 3 \times 5 \times 5 \times 2 =$

A. $2 \times 3^3 \times 5^2$ B. $2 \times 3^4 \times 5^2$

C. $2 \times 4^3 \times 2^5$ D. 2×3^5

54. $5^3 =$

A. $5 \times 5 \times 5$ B. $5 + 5 + 5$

C. $3 \times 3 \times 3 \times 3 \times 3$ D. $3 + 3 + 3 + 3 + 3$

55. Which of the following expressions is equivalent to 4^5?

A. 4×5 B. $4 + 5$

C. $4 + 4 + 4 + 4 + 4$ D. $4 \times 4 \times 4 \times 4 \times 4$

56. Which expression is equivalent to 1,000,000?

A. 10^3 B. 10^4 C. 10^5 D. 10^6

57. Which of the following is equivalent to the expression below?

10^4

A. 104   B. $10 + 4$

C. 10×4 D. $10 \times 10 \times 10 \times 10$

58. Which of the following is another way to write 10^6?

A. ten thousand

B. one hundred thousand

C. one million

D. ten million

59. Which of the following is equivalent to the expression below?

6^5

A. $6 \times 6 \times 6 \times 6 \times 6 \times 6$ B. $5 \times 5 \times 5 \times 5 \times 5 \times 5$

C. $6 \times 6 \times 6 \times 6 \times 6$ D. 5×6

60. Which number must be placed in the box in order for this to be a true statement?

$$16 = 2\square$$

A. 1   B. 2   C. 3   D. 4

61. Which of the following is equal to $3^2 \times 2^3$?

A. $3 \times 3 \times 2 \times 2$ B. $3 \times 3 \times 2 \times 2 \times 2$

C. $3 \times 2 \times 2 \times 3$ D. $(3 + 2) \times (2 + 3)$

62. Which shows the meaning of 4^3?

A. 4×3 B. $4 \times 4 \times 4$

C. $3 \times 3 \times 3 \times 3$ D. $4 + 4 + 4$

63. Which expression represents 7^4 ?

A. 7×4

B. $7 + 4$

C. $7 \times 7 \times 7 \times 7$

D. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$

64. What is 64 in exponential form?

A. 4^3 B. 32^2

C. 8×8 D. $4 \times 4 \times 4$

65. In which quadrant on the coordinate plane would an ordered pair be graphed when the first coordinate is positive and the second coordinate is negative $(+, -)$?
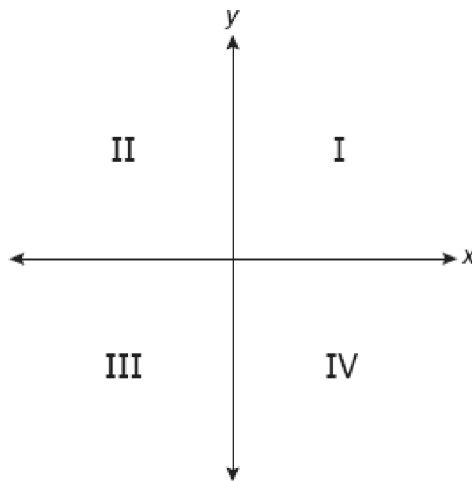
A. I   B. II   C. III   D. IV

66. Let (x, y) represent an ordered pair on the following coordinate plane.
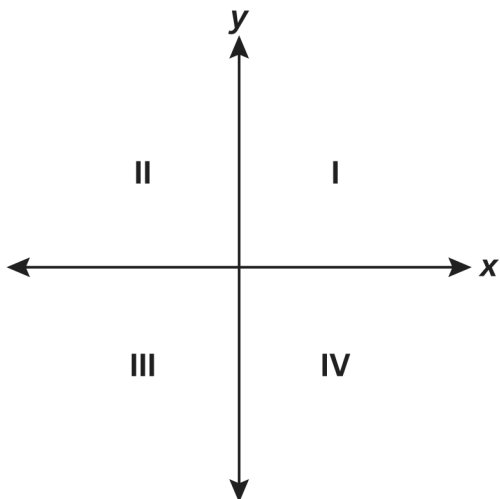
In which quadrants are x and y either both negative numbers or both positive numbers?

A. I and II

B. I and III

C. I and IV

D. II and III

67. Which point is located in quadrant II of the coordinate plane?
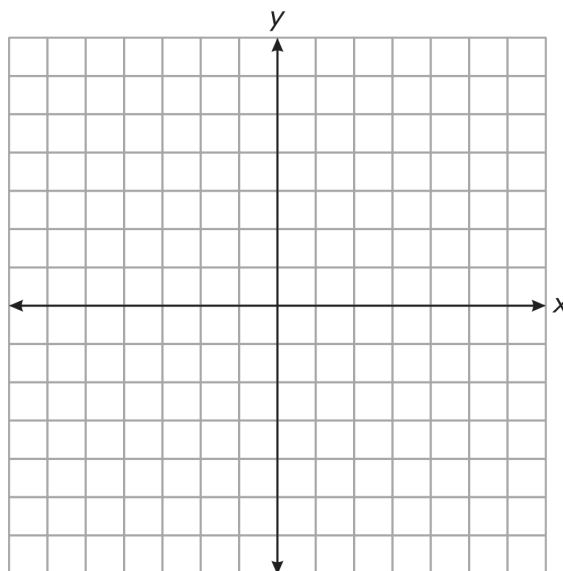
A. $(3, -4)$

B. $(-3, 4)$

C. $(3, 4)$

D. $(-3, -4)$

68. A coordinate plane is shown below.
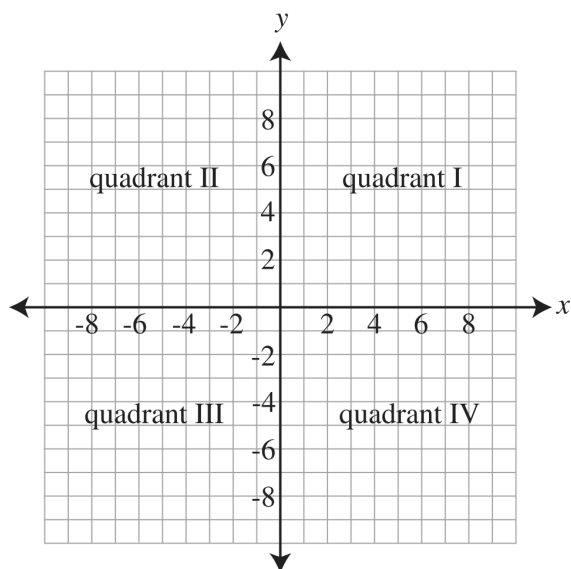
In which quadrant is the point $(-3, -5)$ located?

A. quadrant I   B. quadrant II

C. quadrant III   D. quadrant IV

69. Use the coordinate plane below to answer the following question.
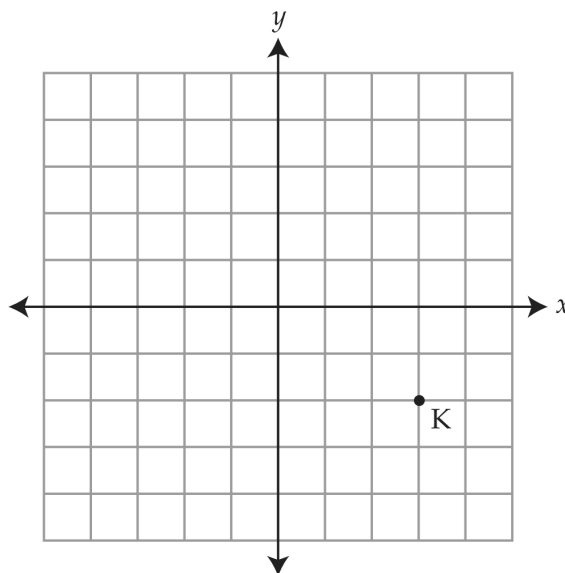
In which quadrant is point K located?

A. quadrant I   B. quadrant II

C. quadrant III   D. quadrant IV

     Summer HW Part II

70. Which of the following appears to be at $(5, 2)$ on the grid?
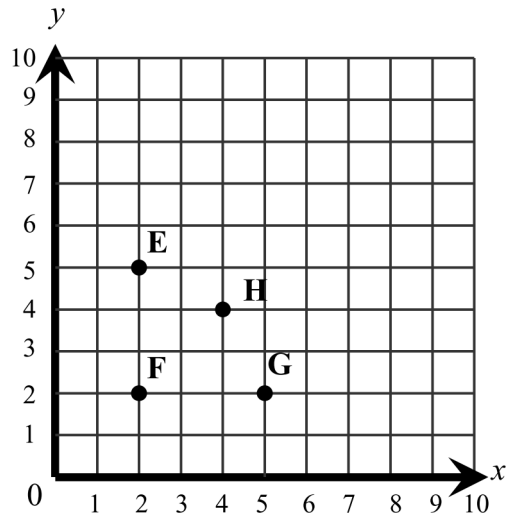
A. E   B. F   C. G   D. H

71. Which point is located $(4, 1)$ on the coordinate grid?
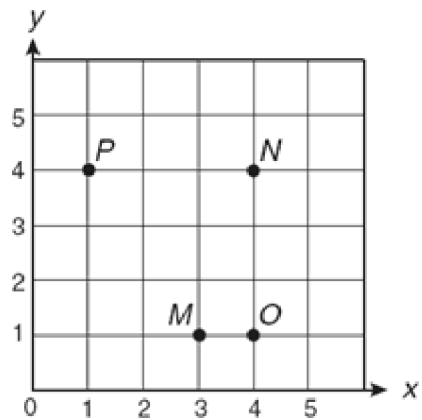
A. M   B. N   C. O   D. P

72. What is the ordered pair for the location of point B on the coordinate grid?
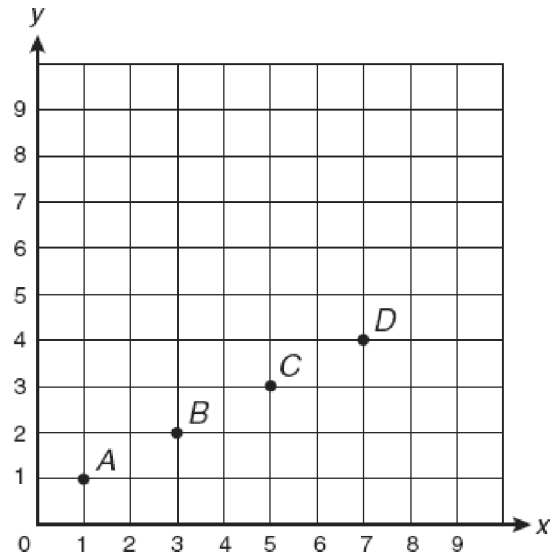
A. $(2, 3)$ B. $(3, 2)$ C. $(5, 3)$ D. $(1, 4)$

73. Look at the coordinate grid below.
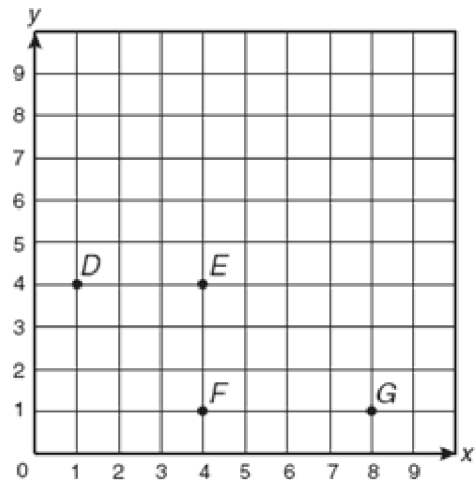
What ordered pair is the location of point F?

A. $(1, 4)$ B. $(4, 1)$ C. $(4, 4)$ D. $(8, 1)$

74. Which are the common factors of 12 and 16?

    A. $\{1, 2, 4\}$ B. $\{1, 2, 3, 4, 8\}$

    C. $\{1, 2, 4, 6, 8\}$ D. $\{1, 2, 3, 4, 6, 8\}$

75. Which of the following lists *all* the factors of 56?

    A. 1, 4, 6, 7, 8, 9, 16, 56

    B. 1, 2, 4, 7, 8, 14, 28, 56

    C. 1, 2, 28, 56

    D. 1, 56

76. Which list shows all factors of 72?

    A. 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

    B. 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

    C. 1, 2, 3, 4, 8, 9, 18, 24, 36, 72

    D. 2, 3, 4, 6, 8, 9, 12, 18, 24, 36

77. Both 54 and 72 are divisible by which group of numbers?

    A. 5, 6, 9   B. 3, 6, 9

    C. 2, 6, 10   D. 6, 9, 10

78. What is the greatest common factor (GCF) of the following numbers?

    12, 15, 18, 36

    A. 3   B. 6   C. 18   D. 36

79. Which is the greatest common factor (GCF) of 36 and 78?

    A. 4   B. 6   C. 9   D. 13

80. What is the greatest common divisor of 54, 36, and 24?

    A. 2   B. 3   C. 6   D. 9

81. What is the greatest common factor of 18 and 24?

    A. 2   B. 3   C. 6   D. 8

82. What is the greatest common factor of 48 and 64?

    A. 2   B. 8   C. 16   D. 24

83. What is the greatest common factor of both 78 and 104?

    A. 4   B. 6   C. 13   D. 26

84. What is the greatest common factor of 45 and 60?

    A. 3   B. 5   C. 15   D. 30

85. What is the greatest common factor of 30 and 75?

    A. 3   B. 5   C. 12   D. 15

86. What is the greatest common factor (GCF) of 36 and 90?

    A. 3   B. 9   C. 18   D. 30

87. What is the greatest common factor (GCF) of 46 and 42?

    A. 2   B. 4   C. 6   D. 7

88. The student council is making gift bags for a fund raiser. They have 105 bags, 150 pens, 115 notebooks, 330 pencils, and 190 highlighters. If each gift bag consists of one bag, 2 pens, 1 notebook, 3 pencils, and 2 highlighters, what is the greatest number of gift bags that can be made?

    A. 75   B. 95   C. 105   D. 110

89. A local reader's club has a set of 12 hardback books, a set of 18 paperbacks, and a set of 36 magazines. Each set can be divided equally among the club members. What is the greatest possible number of club members?

    A. 3 members   B. 6 members

    C. 4 members   D. 8 members

90. A pet store has 24 hamsters, 36 rabbits, and 42 mice. The store wants to put all the pets into smaller, equal-sized groups of the same type of pet. What is the *greatest* number of pets that can be in each group?

    A. 3   B. 4   C. 6   D. 12

91. Which number is a multiple of 6?

    A. 16   B. 28   C. 42   D. 56

92. Which number is a multiple of 7?

    A. 19   B. 20   C. 21   D. 22

93. Which is a common multiple of 3 and 5?

    A. 3   B. 5   C. 10   D. 15

94. Which list has only multiples of 4?

    A. 4, 14, 24, 34   B. 4, 40, 41, 42

    C. 8, 14, 18, 24   D. 8, 12, 16, 20

95. Which of the following numbers is a multiple of 3 ?

    A. 145   B. 158   C. 205   D. 216

96. Which of the following numbers is a common multiple of 6 and 8?

    A. 12   B. 16   C. 24   D. 30

97. Which of the following is a multiple of 12?

    A. 1   B. 3   C. 18   D. 24

98. Marco wrote a list that contained only multiples of 15.

    Which could be Marco's list?

    A. 15, 30, 45, 60, 75, 90, 105

    B. 15, 30, 45, 60, 75, 80, 115

    C. 5, 10, 15, 20, 25, 30, 35, 40

    D. 1, 3, 5, 15

99. What is the least common multiple (LCM) of 4 and 14?

    A. 2   B. 14   C. 28   D. 56

100. What is the least common multiple of 5, 10, and 20?

    A. 5   B. 10   C. 20   D. 35

101. Emma wants to add the 3 fractions shown.

$$\frac{1}{3} + \frac{1}{4} + \frac{1}{6}$$

First, she needs to find the Least Common Multiple.

What is the **Least Common Denominator** for these 3 fractions?

    A. 6   B. 12   C. 24

102. What is the least common multiple of 18 and 40?

    A. 2   B. 40   C. 180   D. 360

103. What is the least common multiple of 5 and 15?

    A. 3   B. 15   C. 30

104. What is the least common multiple of 12, 48 and 72?

    A. 72   B. 144   C. 192   D. 216

105. Which number is both a factor of 100 and a multiple of 5?

    A. 4   B. 40   C. 50   D. 80

106. Which number fits *all* of these clues?

- a multiple of 3
- an even number
- a multiple of 8
- not a multiple of 9

    A. 48   B. 54   C. 63   D. 72

107. All of the numbers Cindy wrote in the box shown below are even numbers *and* multiples of 3.

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    6            36


    12           24
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Which of the following is also an even number *and* a multiple of 3?

    A. 13   B. 21   C. 26   D. 30

108. Which of the following numbers is not composite?

    A. 51   B. 69   C. 89   D. 121

109. Which is a prime number?

    A. 15   B. 17   C. 21   D. 39

110. Jean saw the following numbers on mailboxes.

      71, 73, 75, 77, 79

How many of the numbers are prime?

    A. 2   B. 3   C. 4   D. 5

111. John's locker number is a 2-digit prime number. Which could be John's locker number?

    A. 91   B. 93   C. 97   D. 99

112. Which list shows all of the prime numbers between 0 and 22?

    A. 1, 3, 5, 7, 11, 13, 19

    B. 2, 3, 5, 7, 11, 13, 17, 19

    C. 2, 4, 6, 8, 10, 12, 14, 15, 16, 18, 20, 21

    D. 1, 2, 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21

113. Which of the following is a prime number?

    A. 65   B. 58   C. 39   D. 23

114. Which of the following is a composite number?

    A. 2   B. 3   C. 4   D. 5

115. Sasha's locker combination uses three composite numbers. Which of the following could be the combination?

    A. 4, 27, 39   B. 7, 11, 19

    C. 9, 13, 21   D. 18, 26, 59

116. Which of these numbers is the greatest prime number less than 70?

    A. 69   B. 67   C. 59   D. 57

117. Larry is buying pencils and pens to put into school-supply bags. The pencils come in packages of 15. The pens come in packages of 6. He wants to put 1 pencil and 1 pen into each bag without having any left over. The least common multiple of 15 and 6 is the fewest bags Larry can make. What is the least common multiple of 15 and 6?

    A. 3   B. 21   C. 30   D. 90

118. Reilly and Samantha work at the Frosty Freeze Ice Cream Shop. Reilly works every other day, and Samantha works every third day. Today they are working together. How many days will it be until the next time they work on the same day?

    A. 5 days   B. 6 days

    C. 8 days   D. 12 days

119. Solve each of the unknowns in the equations below:

$$4 \cdot n = 672$$

    A. 42   B. 168   C. 668   D. 2688

120. Solve each of the unknowns in the equations below:

$$x - 76 = 102$$

    A. 26   B. 34   C. 36   D. 178

121. Solve each of the unknowns in the equations below:

$$750 + y = 805$$

    A. 45   B. 50   C. 55   D. 1555

122. Which value for R makes the number sentence below true?

$$R \div 14 = 32$$

    A. 8   B. 13   C. 56   D. 448

123. Which value for N makes the sentence below true?

$$72 \times N = 1,728$$

    A. $N = 24$ B. $N = 29$

    C. $N = 1,659$ D. $N = 1,800$

124. Which number is represented by n?

$$8 \times n = 128$$

A. 13   B. 14   C. 16   D. 19

125. What value of k makes the following equation true?

$$k \div 3 = 36$$

A. 108   B. 98   C. 39   D. 12

126. If $x - 3 = 6$, what is the value of x?

A. 2   B. 3   C. 6   D. 9

127. What is x if $3x = 84$?

A. 20   B. 21   C. 26   D. 28

128. Which of the following is equivalent to $7(5n + 1)$?

A. $36n$ B. $42n$

C. $35n + 1$ D. $35n + 7$

129. Which expression shows 3 less than 20?

A. $20 + 3$ B. $20 - 3$

C. 20×3 D. $20 \div 3$

130. There are 4 tables in Cleo's classroom.

She puts 2 packages of crayons on each table.

Each package has 8 crayons.

Cleo finds the total number of crayons on the tables by multiplying $4 \times 2 \times 8$.

Which expression shows another way Cleo could find the total number of crayons on the tables?

A. $4 + 2 + 8$ B. $4 \times 8 + 2$

C. $2 \times 4 \times 8$ D. $2 \times 4 + 8$