Rising 6th Grade Summer Work

Student Name:

1. Multiply: 102×289

2. Multiply: 817×351

3. Ivy had 193 old stamps, then misplaced 16 of them. The next day she misplaced 125 more. Which equation can be used to find o, the total number of old stamps that Ivy has left?

   A. o = 193 - 16 - 125
   B. o = 193 + 16 + 125
   C. o = 193 - 16
   D. o = 193 - 125

   How many old stamps does Ivy still have?

4. Shaq had 199 antique vases, then misplaced 5 of them. The next day he purchased 167 more antique vases. Which equation can be used to find a, the total number of antique vases that Shaq now has?

   A. a = 199 - 5 + 167
   B. a = (199 + 5) ÷ 167
   C. a = 199 + 167
   D. a = (199 + 5) × 167

   How many antique vases does Shaq have now?

5. Write as a mixed number in simplest form: $6\frac{15}{4}$

6. Write as a mixed number in simplest form: $2\frac{13}{3}$

7. Identify the symbol that correctly compares the following pair of numbers:

$$\frac{1}{5} \square \frac{4}{9}$$

A. >
B. <
C. =

8. Identify the symbol that correctly compares the following pair of numbers:

$$\frac{2}{9} \square \frac{2}{5}$$

A. >
B. <
C. =

9. Order the following fractions from least to greatest.

Use the options provided to fill in the missing information.

$\frac{2}{3}$ $\frac{3}{4}$ $\frac{4}{9}$ $\frac{5}{7}$ $\frac{1}{9}$

Least ⟶ Greatest

10. Add:

$$6\frac{2}{3} + 6\frac{3}{4}$$

Provide an answer as a reduced fraction or mixed number.

11. Add:

$6\frac{5}{6} + 3\frac{4}{10}$

Provide an answer as a reduced fraction or mixed number.

12. Multiply:

$\frac{3}{6} \times \frac{11}{9}$

Provide an answer as a reduced proper fraction or mixed number.

13. Multiply:

$\frac{9}{6} \times \frac{5}{5}$

Provide an answer as a reduced proper fraction or mixed number.

14. Identify the reciprocal of: $\frac{1}{2}$

15. Identify the reciprocal of: 4

16. Divide: $14 \div \frac{1}{4}$

17. Divide: $3 \div \frac{1}{5}$

18. Evaluate:

$$\frac{2}{3} \div \frac{1}{8}$$

19. Evaluate:

$$\frac{2}{9} \div \frac{3}{9}$$

20. Hercules has two pieces of licorice. One is 4.35 inches long. The other is 4.32 inches long. Which statement correctly compares the two lengths?

    A. $4.35 > 4.32$
    B. $4.35 < 4.32$
    C. $4.35 = 4.32$

21. Convert 0.51 to a reduced fraction.

22. Convert 0.7 to a reduced fraction.

23. Convert 0.7 to a simplified fraction.

24. Convert 4.62 to a simplified fraction or mixed number.

25. Multiply: $5(8.78)$

26. Multiply: $2.7(9)$

27. Divide: $0.8 \div 2$

28. Divide: $6.3 \div 9$

29. Multiply: $7.06 \cdot 10^3$

30. Multiply: $57 \cdot 10^2$

31. Choose the best word to describe the number 41.

    A. Prime
    B. Composite
    C. Neither

32. Identify the composite numbers.

    Select three correct answers.

    A. 15
    B. 41
    C. 27
    D. 23
    E. 48

33. What is the prime factorization of 14?

34. What is the prime factorization of 36?

35. Which number is a multiple of 6?

    A. 20
    B. 30
    C. 41
    D. 46

36. Which number is a factor of 32?

    A. 23
    B. 30
    C. 64
    D. 8

37. Find the greatest common factor of 24 and 72.

38. Find the greatest common factor of 18 and 80.

39. Find the least common multiple of 35 and 5.

40. Find the least common multiple of 6 and 20.

41. Find the least common multiple of 15 and 500.

42. Find the least common multiple of 36 and 4.

43. Evaluate: $7(6)+11$

44. Evaluate: $4(5)+16$

45. Evaluate the following numerical expression:

    $\left[(5+8)-(15-8)\right]\div 2$

46. Evaluate the following numerical expression:

    $1+\left\{\left[(2\times 1)+4\right]\times\left[(7+2)-6\right]\right\}$

47. Solve for m: $2 = m - 3$

48. Solve for z: $8 = z - 12$

49. What number goes in the box to make a true statement?

    Use an option provided to fill in the missing information.

4	50	30	44

    $\square \times 10 = 40$

50. What number goes in the box to make a true statement?

    $\square \div 2 = 9$

51. An elementary school had several students going on a music trip. The school used 11 buses that each held 36 students as transportation. All the buses were completely filled. How many students went on the music trip?

    Fill in the missing pieces of the equation below that can be used to represent this situation. Note: s represents the total students.

    Use the options provided to fill in the missing information. Not all answers will be used.

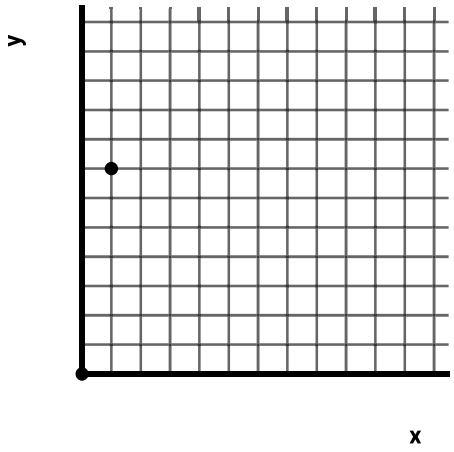
s	11	+	-	×	÷

    $36 \; \square \; \square = \square$

52. Shaq has 3,665 rubber bands. Keenan has 1,928 more rubber bands than Shaq has. How many rubber bands does Keenan have?

    Write an equation to represent the situation. Use r to represent the unknown number of rubber bands. Do not actually solve the equation.

53. The ordered pairs for the points on the coordinate plane satisfy the equation y = 7x.



Which of these tables exclusively show other points that satisfy the equation y = 7x?

A.

x	34	38	42	46
y	238	266	294	322

B.

x	32	36	40	44
y	39	252	280	51

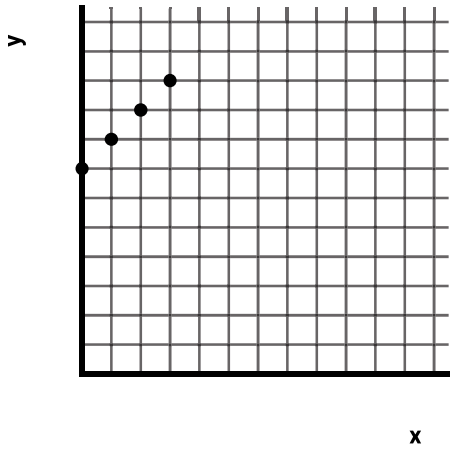
C.

x	32	36	40	44
y	224	43	280	308

D.

x	32	36	40	44
y	39	43	46	51

54. The ordered pairs for the points on the coordinate plane satisfy the equation $y = x + 7$.



Which of these tables exclusively show other points that satisfy the equation $y = x + 7$?

A.

x	18	22	26	30
y	126	161	182	217

B.

x	18	22	26	30
y	25	29	33	37

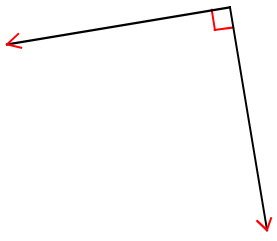
C.

x	18	22	26	30
y	25	29	182	210

D.

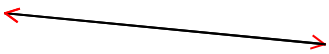
x	15	19	23	27
y	22	27	30	35

55. What type of angle is this?



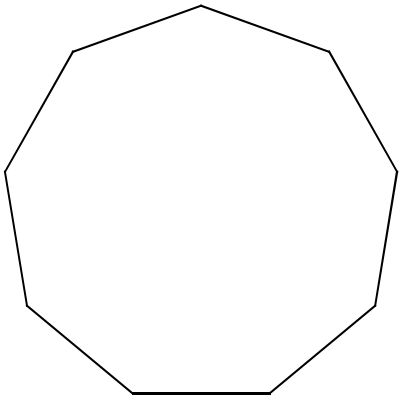
A. Obtuse
B. Right
C. Acute
D. Straight

56. What type of angle is this?



A. Right
B. Acute
C. Straight
D. Obtuse

57. Classify this figure by its number of sides:

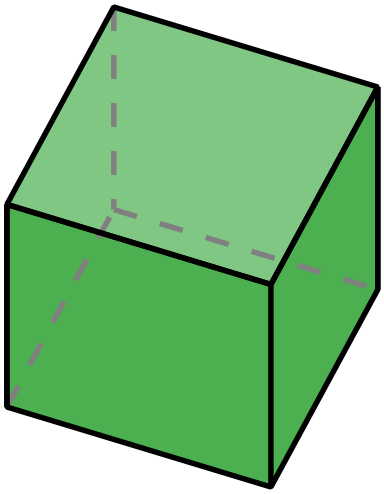


A. Triangle
B. Octagon
C. Nonagon
D. Quadrilateral

58. Which of the following is NOT true for a square?

A. Its four interior angles are not always congruent.
B. Its diagonals bisect each other.
C. It always has four congruent sides.
D. It is always a rhombus.

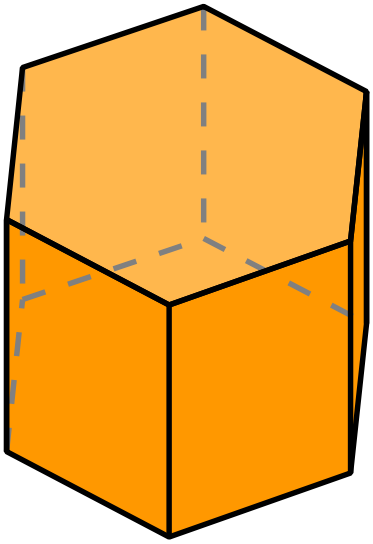
59. What is the shape of the bases of the following figure?



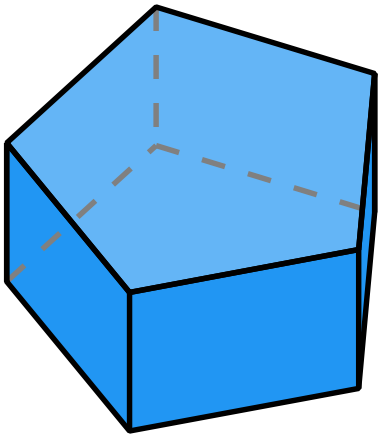
A. pentagon
B. heptagon
C. rectangle
D. triangle

60. Which of the following figures is a triangular prism?

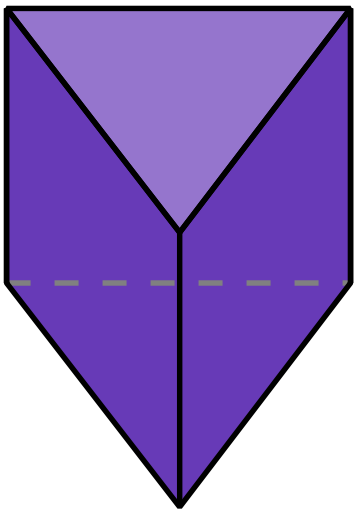
A.



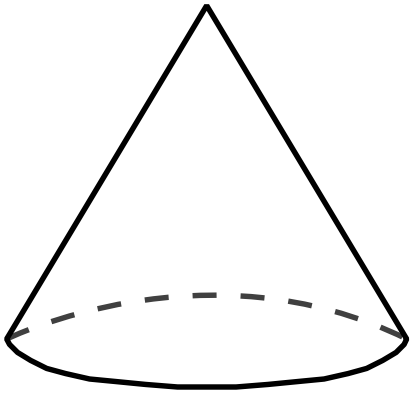
B.



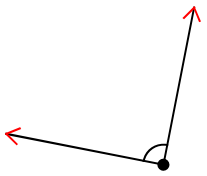
C.



D.

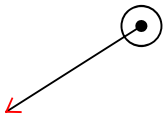


61. What is the measurement of this angle?



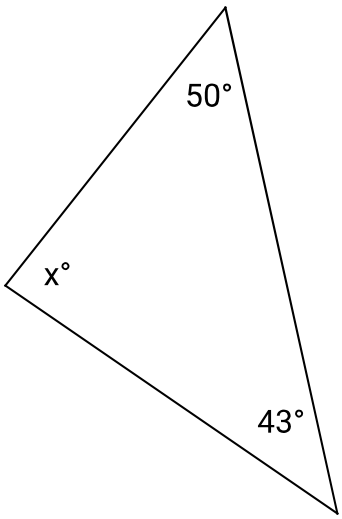
A. 360°
B. 180°
C. 90°
D. 270°

62. What fraction of a turn is this angle?

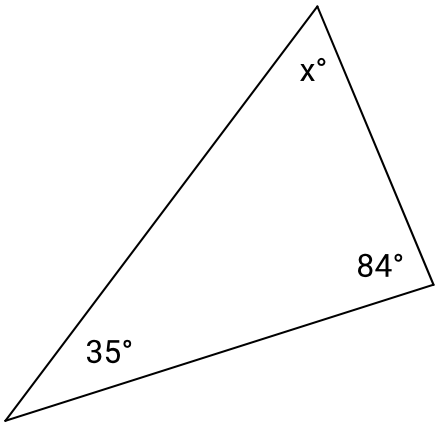


A. $\frac{1}{4}$ turn
B. $\frac{3}{4}$ turn
C. $\frac{1}{2}$ turn
D. 1 full turn

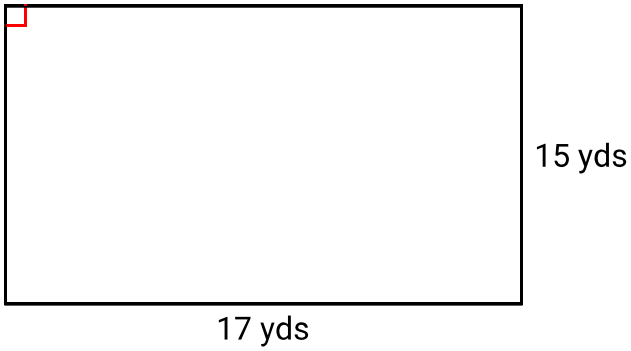
63. What is the measure of the missing angle?



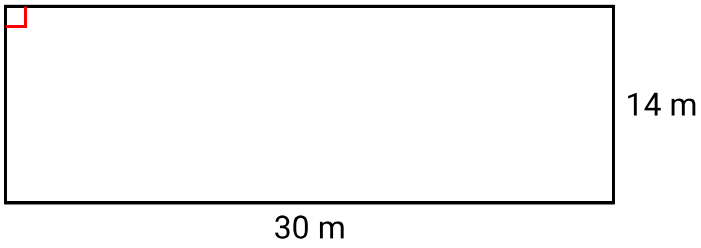
64. What is the measure of the missing angle?



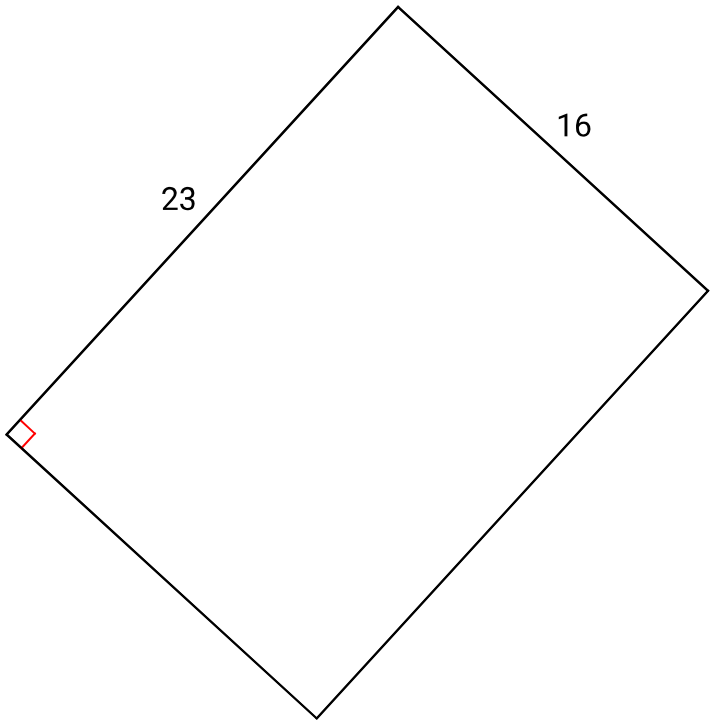
65. Find the perimeter of the rectangle below.



66. Find the perimeter of the rectangle below.



67. Use the rectangle below to answer the following question(s).



How many sides have a length of 23 units?

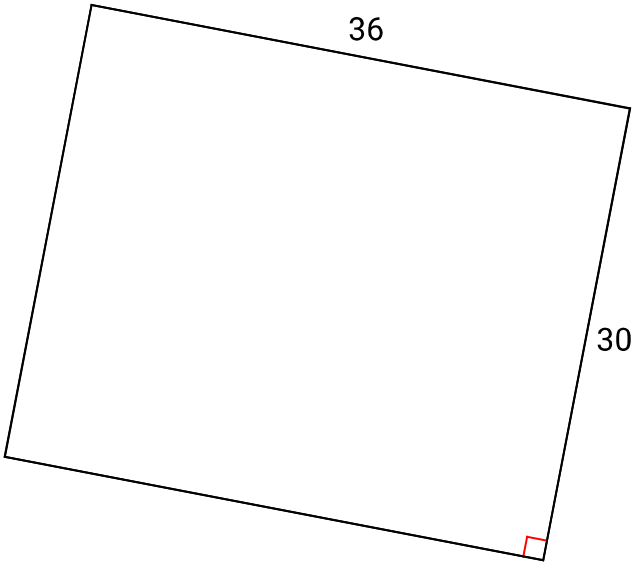
How many sides have a length of 16 units?

What is the formula for the perimeter of a rectangle?

A. $P = \ell \times w$
B. $P = 2 \times \ell \times 2 \times w$
C. $P = \ell + w$
D. $P = 2 \times \ell + 2 \times w$

What is the perimeter of the rectangle?

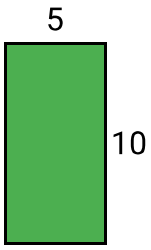
68. Use the rectangle below to answer the following question(s).



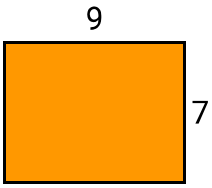
Fill in the blank for this perimeter expression:

$P = 2 \times 36 + \_\_\_ \times 30$

69. A rectangle has a width of 5 and a length of 10. Find its area.



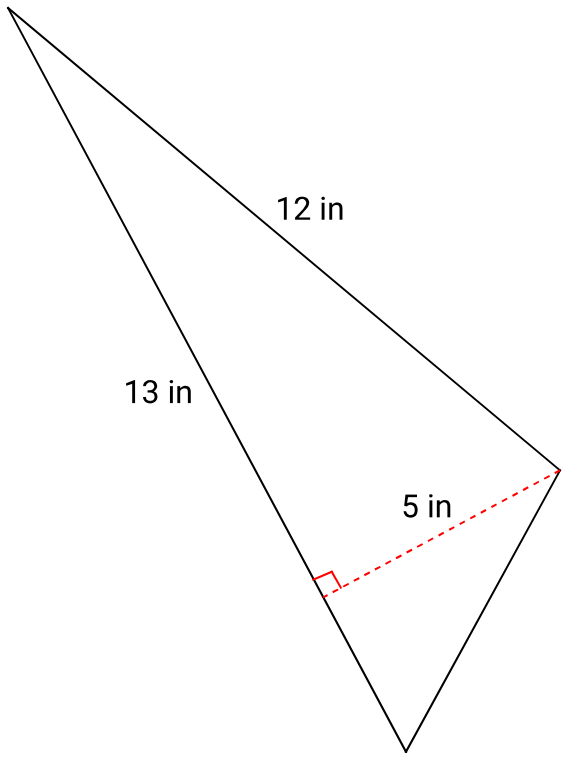
70. Find the space inside a rectangle with a width of 9 and a length of 7.



71. A rectangle has an area of 40 square units and a length of 4 units. Find its width.

72. If the length of a rectangle is 12 units and its area is 132 square units, what is its width?

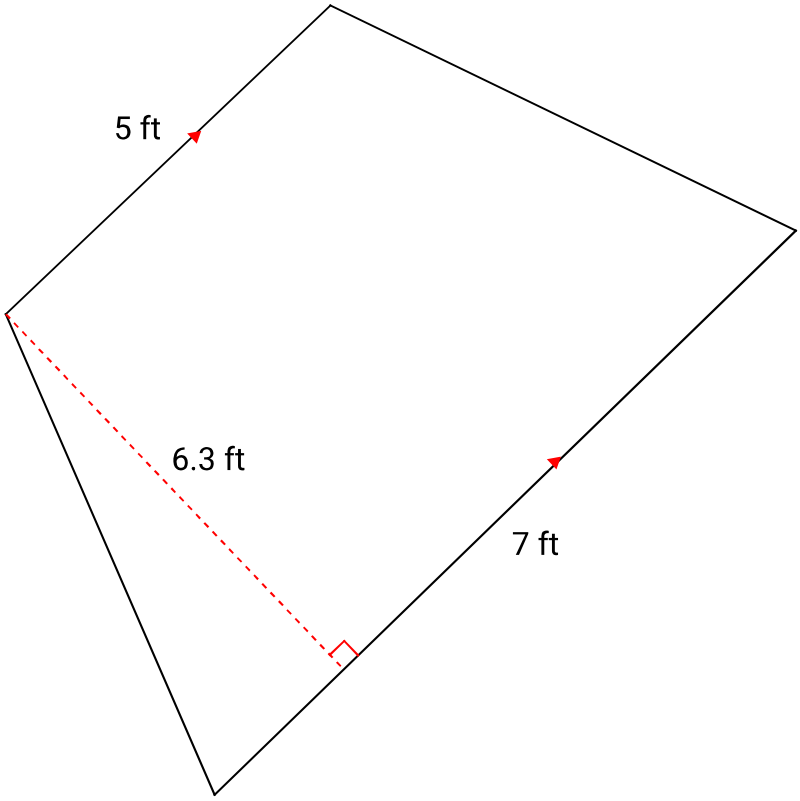
73. Find the area of the following figure:



Provide an answer accurate to the nearest tenth.

Note: Figure may not be drawn to scale.

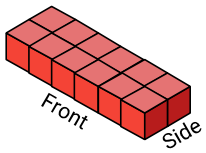
74. Find the area of the following figure:



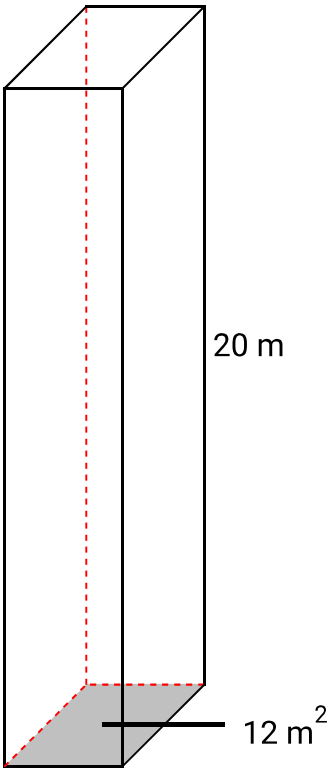
Provide an answer accurate to the nearest tenth.

Note: Figure may not be drawn to scale.

75. What is the volume of the rectangular prism?



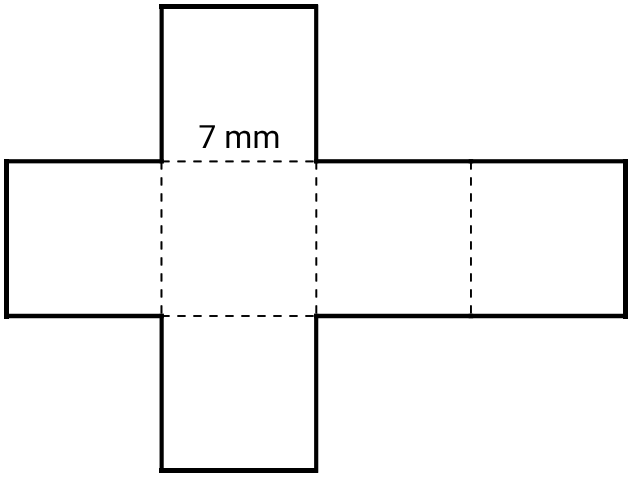
76. What is the volume of the rectangular prism?



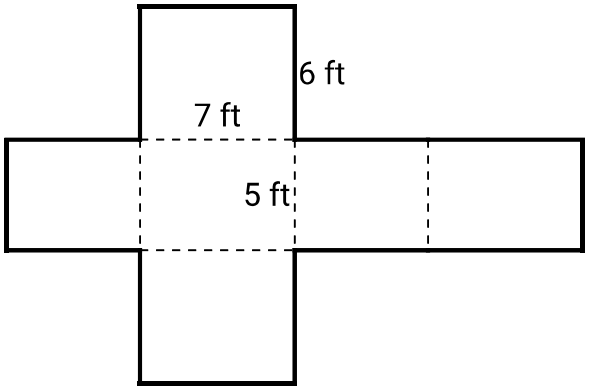
77. A rectangular prism has base area 70 square centimeters and height 19 centimeters. Find its volume, in cubic centimeters.

78. A rectangular prism has volume 1,425 cubic centimeters, width of 19 centimeters, and height 5 centimeters. Find its length, in centimeters.

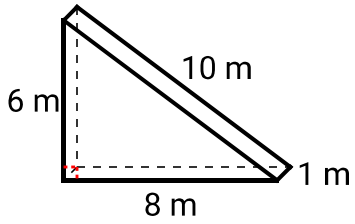
79. A cube can be unfolded into the net shown below. Find the total surface area of the cube.

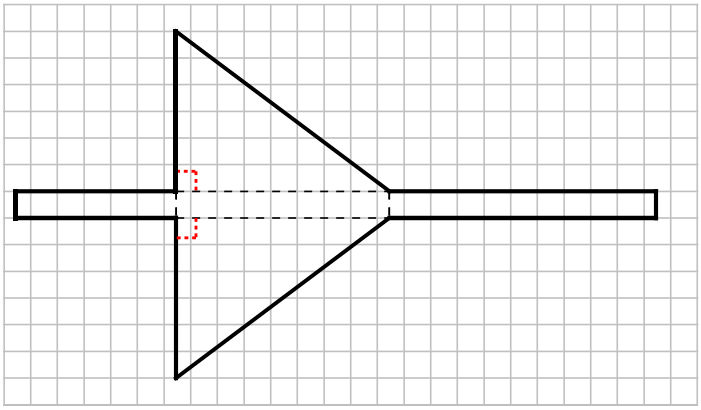


80. A rectangular prism can be unfolded into the net shown below. Find the total surface area of the rectangular prism.

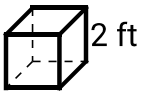


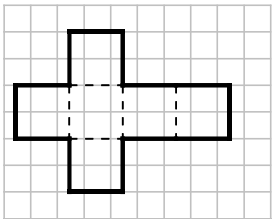
81. The following triangular prism can be unfolded into the net shown below. Find the surface area of the triangular prism.



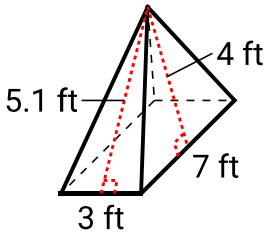


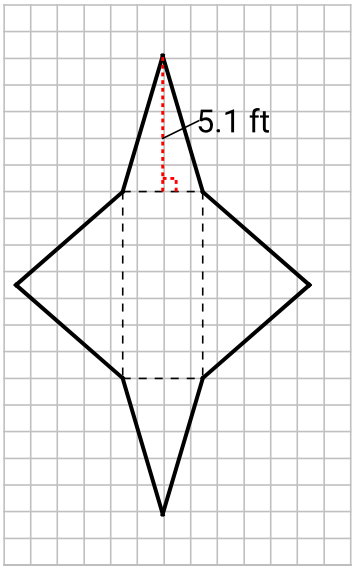
82. The following cube can be unfolded into the net shown below. Find the surface area of the cube.



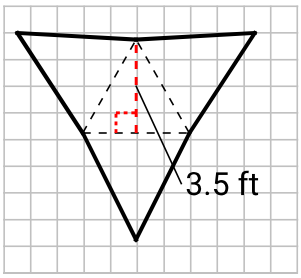


83. The following right rectangular pyramid can be unfolded into the net shown below. Find the lateral surface area of the rectangular pyramid. Note: The image representing the 3D pyramid may not be drawn to scale.

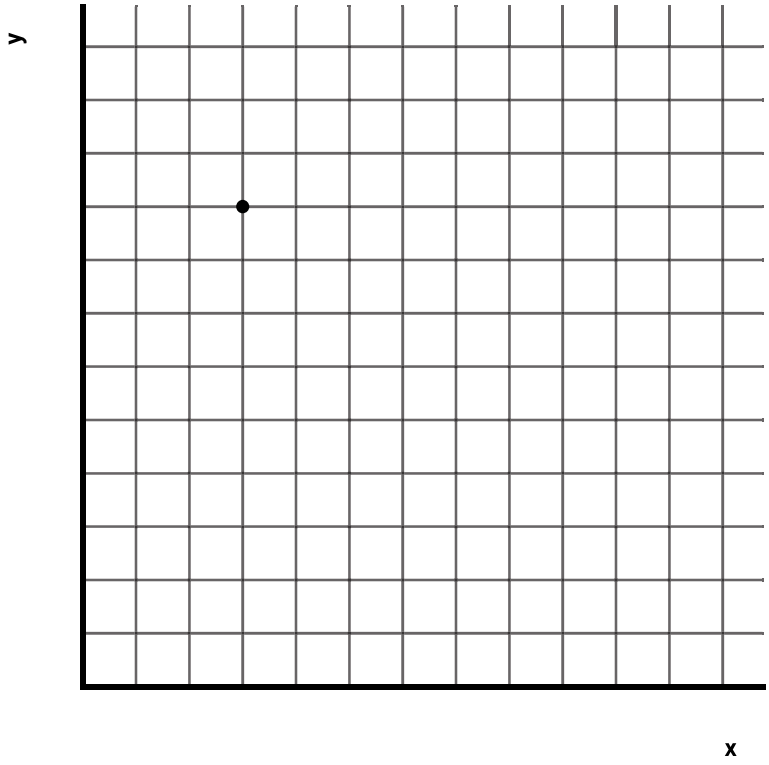




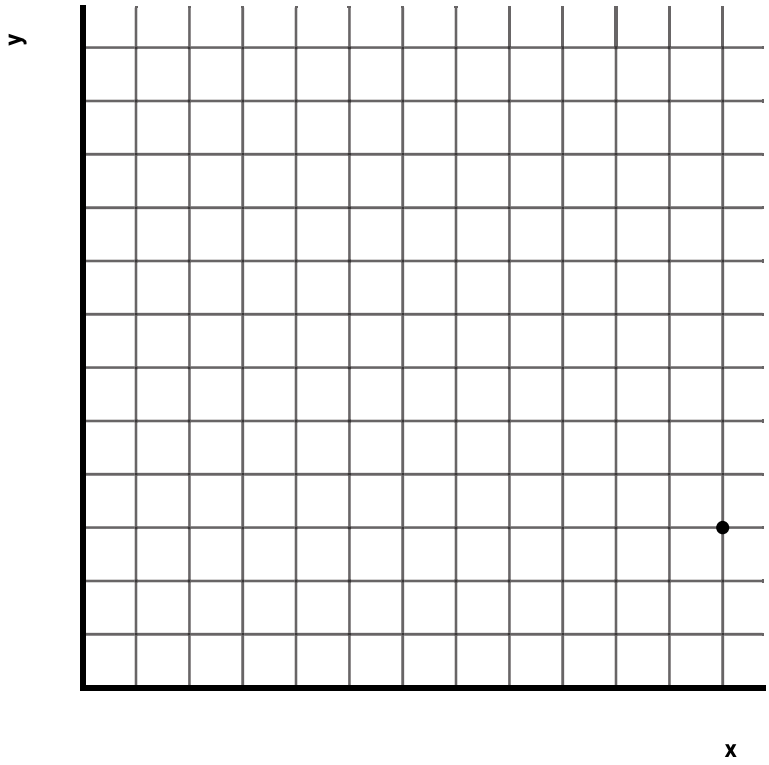
84. The following right triangular pyramid has an equilateral base. The pyramid can be unfolded into the net shown below. Find the lateral surface area of the triangular pyramid. Note: The image representing the 3D pyramid may not be drawn to scale.



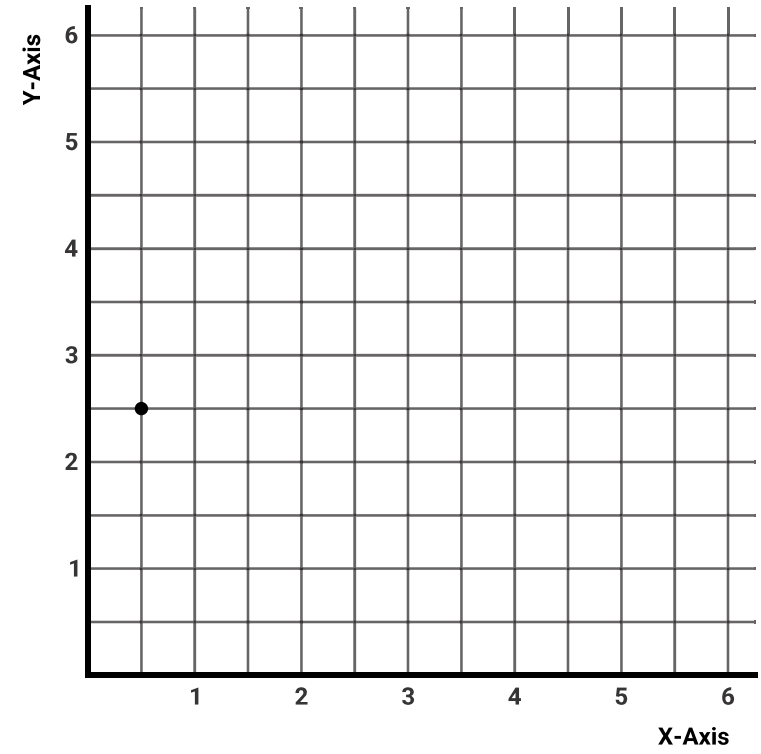
85. Write the coordinates of the point that is plotted below.



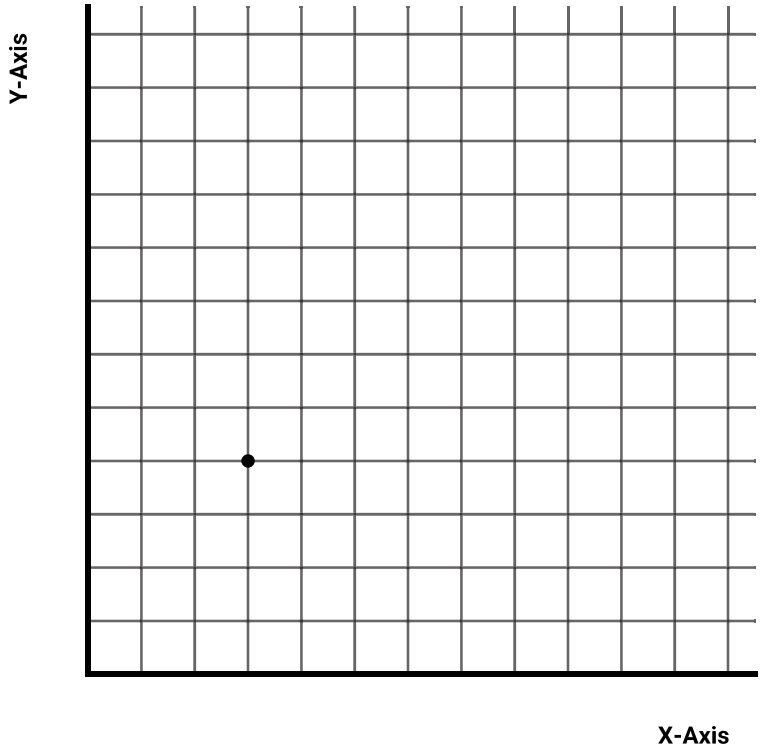
86. Write the coordinates of the point that is plotted below.



87. Name the coordinates of the point that is plotted below.



88. Name the coordinates of the point plotted below.



89. Convert: 2,320 oz = _____ lb

    16 oz = 1 lb

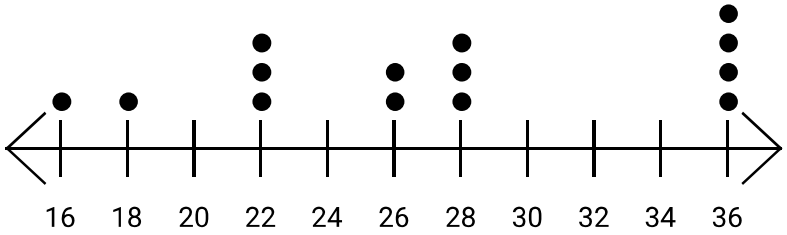
90. Convert: 437 lb = _____ oz

    16 oz = 1 lb

91. If Winston has been writing a report for 6 days, for how many seconds has he been writing a report?

92. Determine how many minutes there are in 4 hours.

93. Fuel Economy (mpg)



Using the data provided in the dot plot above, determine which stem-and-leaf plot represents the same set of data.

A.

Stem	Leaf
1	6 8
2	2 2 2 6 6 8 8 8
3	6 6 6 6

Key: 2 | 6 = 26

B.

Stem	Leaf
1	6 8
2	0 2 2 4 6 6 8 8
3	6 6 6 6

Key: 2 | 6 = 26

C.

Stem	Leaf
1	6 8
2	0 2 2 6 6 8 8 8
3	6 6 6 6

Key: 2 | 6 = 26

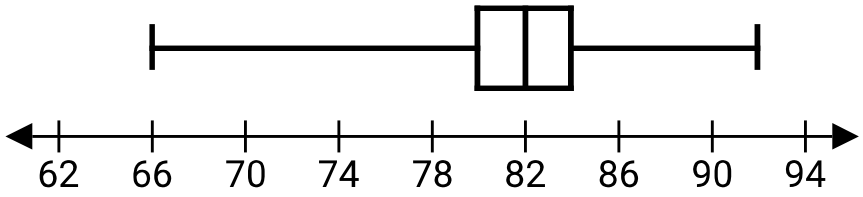
D.

Stem	Leaf
1	6 8
2	2 2 2 4 4 6 6 8 8
3	6 6 6 6

Key: 2 | 6 = 26

94. The test scores for local schools were recorded. The box plot below shows a summary of the results.

Test Scores for Local Schools



Based on the data shown in the box plot above, which stem-and-leaf plot could NOT possibly be representative of the test scores?

A.

Stem	Leaf
6	6
7	9
8	1 1 3 4 4
9	2

Key: 8 | 4 = 84

B.

Stem	Leaf
6	6
7	
8	0 0 2 2 4 4
9	2

Key: 8 | 4 = 84

C.

Stem	Leaf
6	4 6
7	
8	0 0 1 2 2 2 4 4
9	1 2

Key: 8 | 4 = 84

D.

Stem	Leaf
6	6 7
7	
8	0 0 1 2 2 3 3 5
9	1 2

Key: 8 | 4 = 84

95. Which choice describes median?

A. Average
B. Highest minus lowest
C. Middle number
D. Most frequent

96. Which choice describes mode?

A. Most frequent
B. Highest minus lowest
C. Middle number
D. Average

97. Determine the mean, median, mode, and range for the following set of values. Provide an answer for the mean accurate to the nearest tenth.

6, 18, 10, 3, 17, 18

Range: Mean:

Median: Mode:

98. Determine the mean, median, mode, and range for the following set of values. Provide an answer for the mean accurate to the nearest tenth.

18, 3, 7, 7, 1, 13, 14, 7, 12

Mode: Mean:

Median: Range:

99. True or False: The question below is a statistical question.

How many teeth has Sally lost thus far?

A. True
B. False

100. Which question below is a statistical question?

A. How many books did Juan's sister read this year?
B. How many teeth has Juan lost thus far?
C. During any given month, how many times do the ballerinas wake up early?
D. How long does it take for Juan to get to work?