Homework for week of March 16th

Name: _____ **Date:** _____

1. What is the greatest common factor of 56 and 92?

   A. 2 B. 4 C. 7 D. 8

2. What is the value of $\frac{5}{6} \div \frac{3}{7}$?

   A. $\frac{15}{42}$ B. $\frac{18}{35}$ C. $\frac{35}{18}$ D. $\frac{42}{15}$

3. Omar has $2\frac{3}{4}$ cups of dough to make dumplings. If he uses $\frac{3}{16}$ cup of dough for each dumpling, how many whole dumplings can Omar make?

   A. 13 B. 14 C. 15 D. 16

4. Carol has $1\frac{5}{8}$ cups of yogurt to make smoothies. Each smoothie uses $\frac{1}{3}$ cup of yogurt.

   What is the maximum number of smoothies that Carol can make with the yogurt?

   A. 1 B. 4 C. 5 D. 7

5. An art teacher has a total of $\frac{7}{8}$ pound of clay. The teacher puts $\frac{1}{16}$ pound of clay at each work station. The teacher sets up an equal number of work stations in each of 2 classrooms. How many work stations does the teacher set up in each of the classrooms?

6. Point W is located at $(-2, 3)$ on a coordinate plane. Point W is reflected over the x-axis to create point W'. Point W' is then reflected over the y-axis to create point W". What ordered pair describes the location of point W"?

   Explain how you determined your answer.

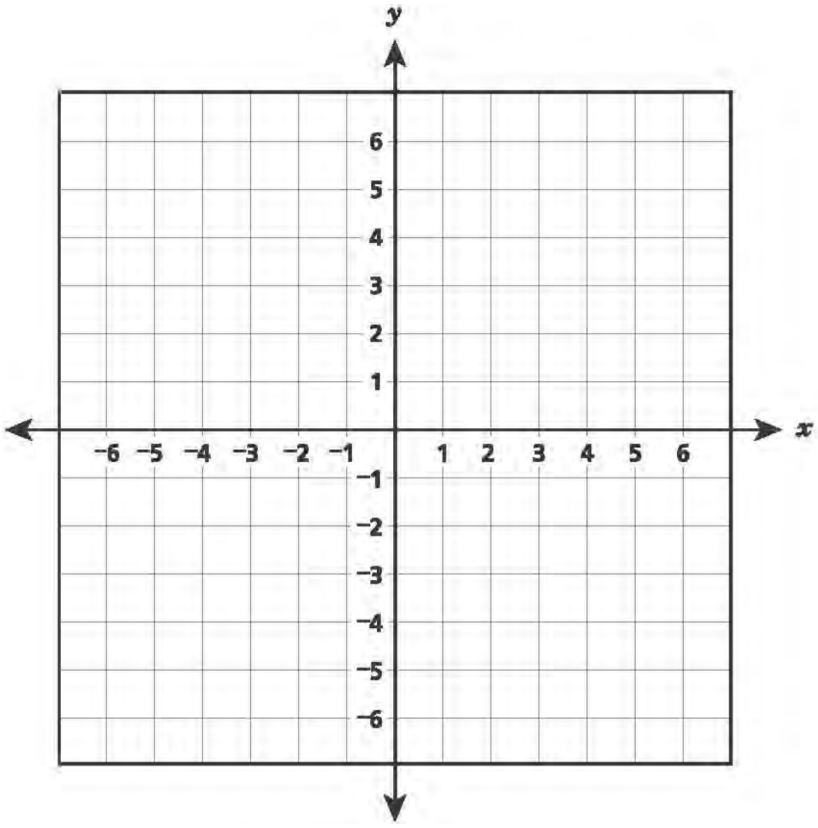
7. The coordinates of point A are $(-6, 4)$. The coordinates of point B are $(3, 4)$. Which expression represents the distance, in units, between points A and B?

   A. $|-6| + |3|$ B. $|3| - |-6|$

   C. $|-6| + |-4|$ D. $|4| - |-6|$

8. The area of a rectangular park is $\frac{3}{5}$ square mile. The length of the park is $\frac{7}{8}$ mile. What is the width of the park?

9. The coordinate grid below represents a town. Curtis's house is at $(-4, -6)$ and Jean's house is at $(-4, 3)$. Plot the points where Curtis's house and Jean's house are located.



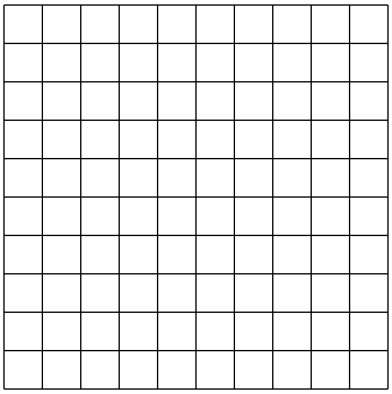
Each unit on the grid represents 1 mile. If Curtis can ride his bike at a constant rate of 12 miles per hour, how many minutes would it take Curtis to ride from his house to Jean's house?

10. A park planner is designing a dog park. He wants to use a metal fence to enclose a kennel at the dog park. The vertices of the fence are shown below. The units on the coordinate plane are yards.

- Point A $(4, -4)$
- Point B $(-4, -4)$
- Point C $(-4, 3)$
- Point D $(1, 3)$
- Point E $(1, -1)$
- Point F $(4, -1)$

The park planner wants to add a gate between points A and F. He will not put metal fencing on that side. What is the total number of yards of metal fencing that will be needed for the kennel at the dog park?

You may use the grid below to help you solve the problem.



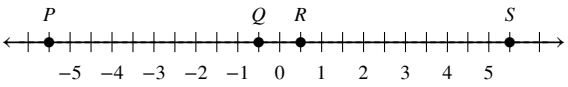
11. What is the least common multiple of 4 and 10?

A. 14 B. 20 C. 40 D. 60

12. What is the greatest common factor of 42 and 84?

A. 7 B. 21 C. 42 D. 84

13. Which point on the number line below represents the number opposite the number $-5\frac{1}{2}$?



A. point P B. point Q

C. point R D. point S

14. The inequality below compares two rational numbers.

$$-\frac{8}{18} > -\frac{17}{27}$$

If the two numbers were plotted as values on a horizontal number line, which statement would be true?

A. Both numbers lie to the right of 0, and $-\frac{8}{18}$ lies to the left of $-\frac{17}{27}$.

B. Both numbers lie to the left of 0, and $-\frac{8}{18}$ lies to the left of $-\frac{17}{27}$.

C. Both numbers lie to the right of 0, and $-\frac{8}{18}$ lies to the right of $-\frac{17}{27}$.

D. Both numbers lie to the left of 0, and $-\frac{8}{18}$ lies to the right of $-\frac{17}{27}$.

15. Timothy went to a baseball game. After the game, he wanted to ride the bus home. The red line and the blue line buses both stop at the stadium.

- A red line and a blue line bus both left the stadium at 4:00 p.m.
- Red line buses were scheduled to leave the stadium every 6 minutes.
- Blue line buses were scheduled to leave the stadium every 8 minutes.

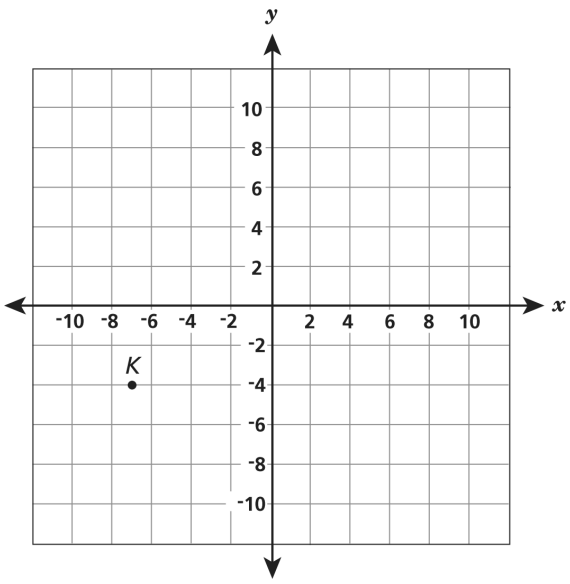
If the buses run on schedule, when is the next time a red line and a blue line bus will leave together?

16. The coordinates of the vertices of a rectangle are $(-2, 3)$, $(4, 3)$, $(4, -4)$, and $(-2, -4)$. What are the dimensions of the rectangle?

A. 1 unit by 2 units B. 1 unit by 6 units

C. 7 units by 2 units D. 7 units by 6 units

17. What coordinates best represent the location of point K on the coordinate plane below?



A. $(-7, -4)$ B. $(-7, 4)$

C. $(-4, -7)$ D. $(-4, 7)$

18. Arnold's entire workout consisted of 10 minutes of warm-up exercises, 25 minutes of lifting weights, and 15 minutes on the treadmill. What was the ratio of the number of minutes he lifted weights to the total number of minutes of his entire workout?

A. 1 : 1 B. 1 : 2 C. 3 : 10 D. 5 : 8

19. There are 230 calories in 4 ounces of a type of ice cream. How many calories are in 6 ounces of that ice cream?

A. 232 B. 236 C. 345 D. 460

20. Residents of a small city voted on whether to allow a developer to build a shopping center. The number of votes in favor of the shopping center was 4,400. The number of votes against the shopping center was 17,600. What percent of the voters were *in favor* of building the shopping center?

A. 20% B. 25% C. 40% D. 44%

21. Mr. Anderson drove 168 miles in $3\frac{1}{2}$ hours. He then drove the next $2\frac{1}{4}$ hours at a rate of 5 miles an hour faster than the first rate.

How many miles did Mr. Anderson drive during the $5\frac{3}{4}$ hours?

22. What is the solution of the equation below?

$$x + 8.63 = 11.001$$

A. $x = 19.631$ B. $x = 10.138$

C. $x = 3.471$ D. $x = 2.371$

23. Solve the equation below.

$$0.3r = 2.1$$

A. $r = 0.7$ B. $r = 1.8$

C. $r = 7$ D. $r = 18$

24. Each side of a regular hexagon is represented by $(x + 6)$. Which expression represents the perimeter of the hexagon?

A. $36x$ B. $5x + 30$

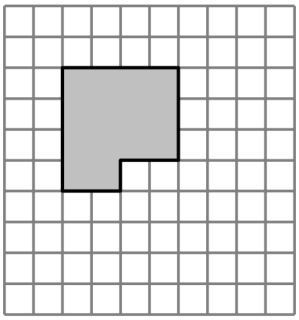
C. $6x + 6$ D. $6x + 36$

25. The length of each side of regular pentagon *ABCDE* is represented by $(3x + 1)$. Which expression represents the perimeter of the pentagon?

A. $15x + 5$ B. $18x + 6$

C. $3x + 5$ D. $15x + 1$

26. What is the area of the shaded figure on the grid below?

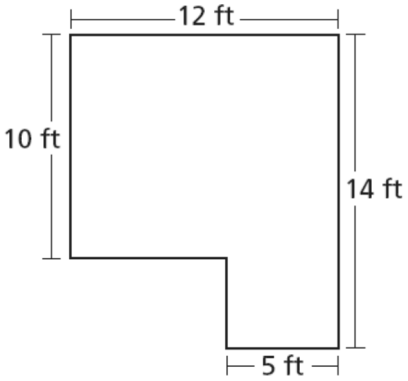


☐ is one square unit

A. 12 square units B. 14 square units

C. 16 square units D. 18 square units

27. 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. $(12 \times 10) + (5 \times 4)$

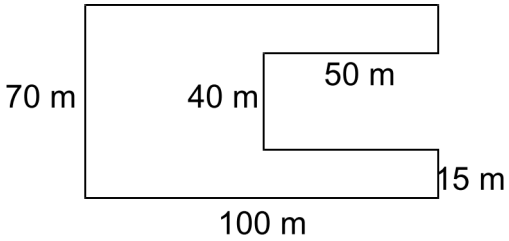
28. Look at the figure below.

Which expression can be used to determine the area of the figure?

A. $(8 \times 6) + (2 \times 3)$ B. $(8 \times 10) + (2 \times 3)$

C. $(10 \times 6) + (2 \times 3)$ D. $(10 \times 2) + (2 \times 3)$

29. The staff of Sunnydale Elementary is building a fence around the school playground. The figure below shows the measurements of the land.



Which expression can the school staff use to find the perimeter of the playground for the fence?

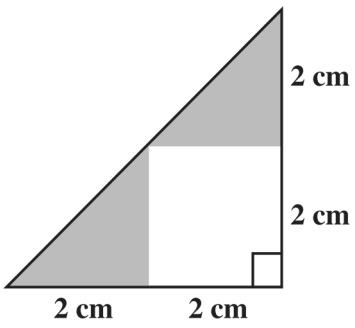
A. $2(70) + 2(100)$

B. $2(70) + 2(100) + 2(50)$

C. $70 + 100 + 40 + 15 + 50$

D. $70 + 2(100) + 2(50) + 2(15) + 40$

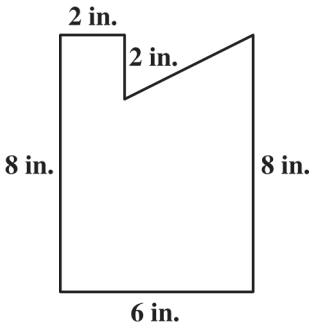
30. What is the area of the shaded region in the figure shown below?



A. $4\ cm^2$ B. $6\ cm^2$

C. $8\ cm^2$ D. $16\ cm^2$

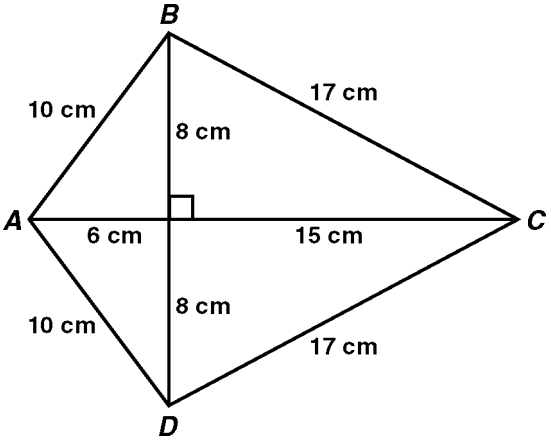
31. A right triangle is removed from a rectangle as shown in the figure below. Find the area of the remaining part of the rectangle.



A. $40\,\text{in.}^2$ B. $44\,\text{in.}^2$

C. $48\,\text{in.}^2$ D. $52\,\text{in.}^2$

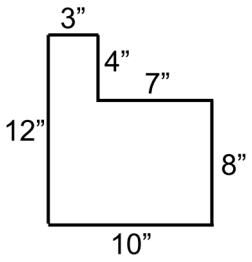
32. Figure *ABCD* is a kite.



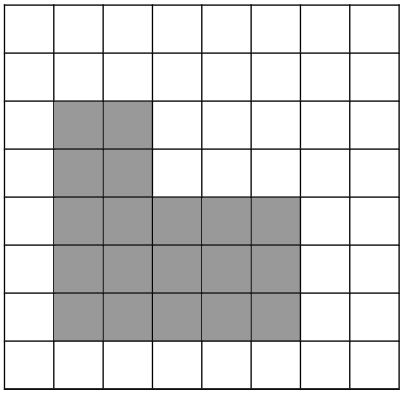
What is the area of figure *ABCD*, in square centimeters?

A. 120 B. 154 C. 168 D. 336

33. Find the area of the figure bellow.



34. A figure is shown on the grid.

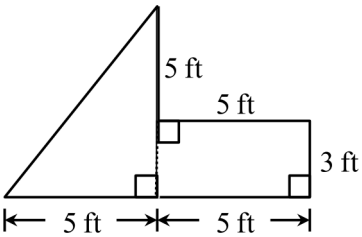


What is the area of the figure?

A. 16 square units B. 19 square units

C. 20 square units D. 25 square units

35. The diagram below shows the dimensions of the patio in Mr. Hampshire's backyard.



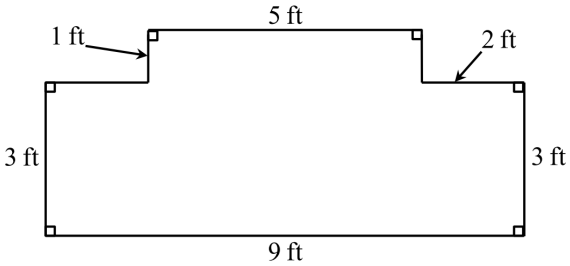
Area of Rectangle = length × width

Area of Triangle = $\frac{1}{2}$ base × height

What is the area, in square feet, of the patio?

A. 20 square feet
B. 35 square feet
C. 40 square feet
D. 55 square feet

36. Mrs. Salinas made a rose garden with the dimensions pictured below

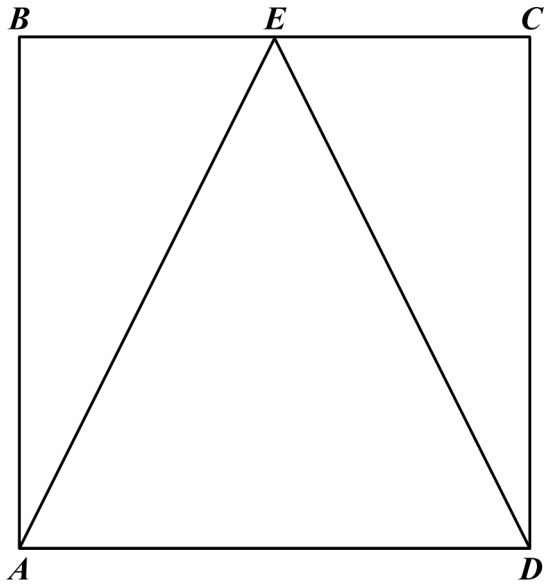


What is the area, in square feet (sq ft), of Mrs. Salinas's rose garden?

A. 23 sq ft
B. 26 sq ft
C. 27 sq ft
D. 32 sq ft

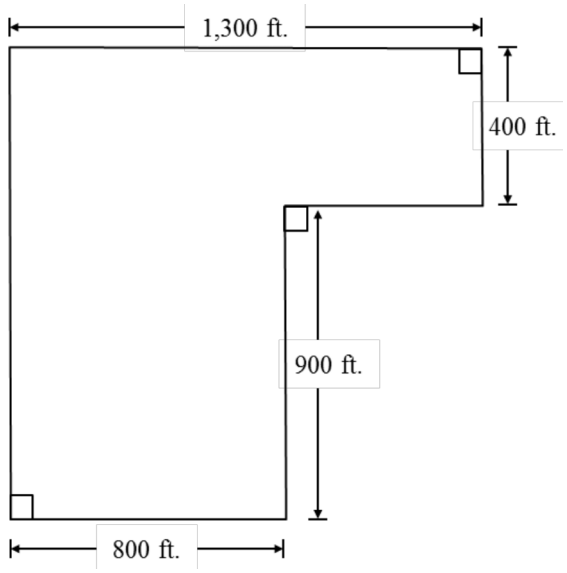
37. Triangle *ADE* is inside rectangle *ABCD*. Point *E* is halfway between points *B* and *C* on the rectangle. Side *AB* is 8 cm and side *AD* is 7 cm.

What is the area of triangle *ADE*? Show your work.



(Not drawn to scale)

38. Brian likes to go bird watching along the Harvest Park Trail in a nearby forest preserve. He wants to calculate the area enclosed by the trail, which is shown below.

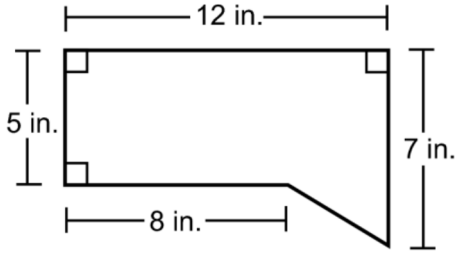


Based on the diagram, what is the closest approximation of the area **in square yards** of the land enclosed by the trail?

A. 188,000 sq. yds. B. 138,000 sq. yds.

C. 600 sq. yds. D. 300 sq. yds.

39. The dimensions of a figure are shown below.



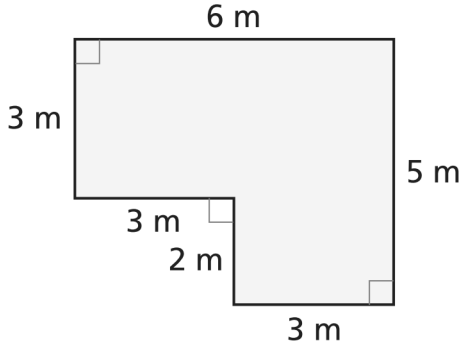
What is the total area of the figure?

A. 60 square inches B. 64 square inches

C. 68 square inches D. 84 square inches

40. The figure lengths of the sides of a farmer's field.

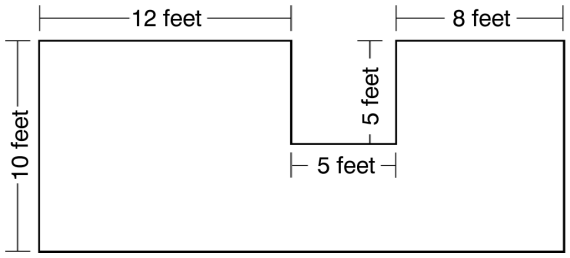
Farmer's Field



What is the area, in square meters, of the field?

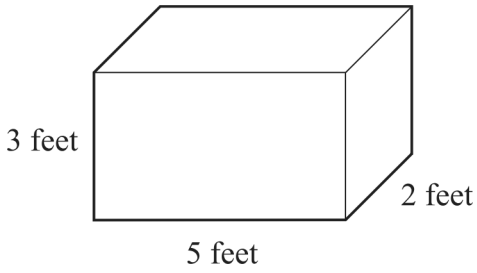
A. 24 B. 27 C. 30 D. 33

41. Mary plans to put carpeting in her house. The floor plan shows the part of her house that will be carpeted. How many square feet of carpet does she need?



A. 175 square feet
B. 200 square feet
C. 225 square feet
D. 250 square feet

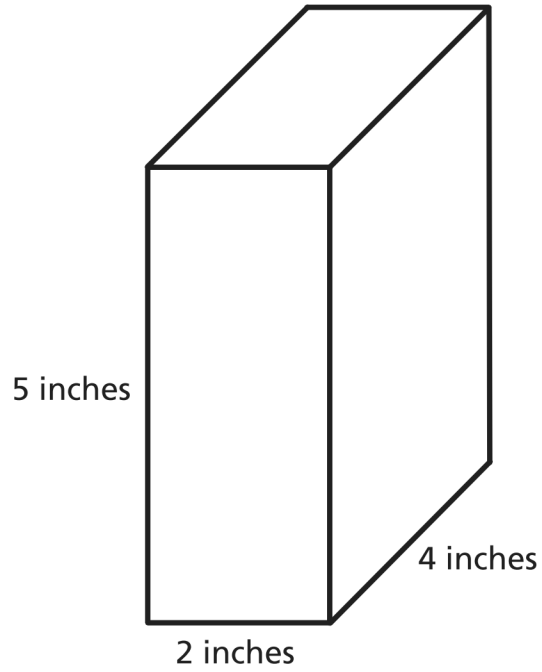
42. A campsite provides a locking, rectangular box with the dimensions shown below to secure food from bears.



What is the surface area of the box?

A. 30 square feet
B. 31 square feet
C. 62 square feet
D. 72 square feet

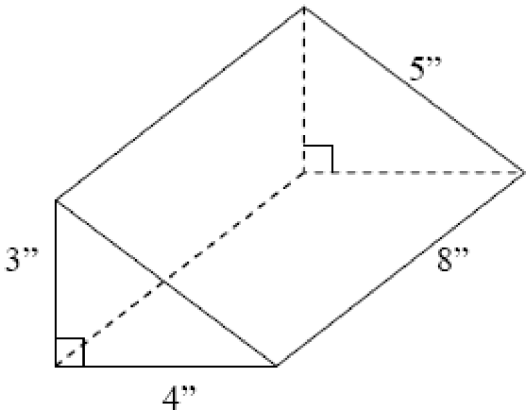
43. Look at the right rectangular prism below.



What is the surface area, in square inches, of the prism?

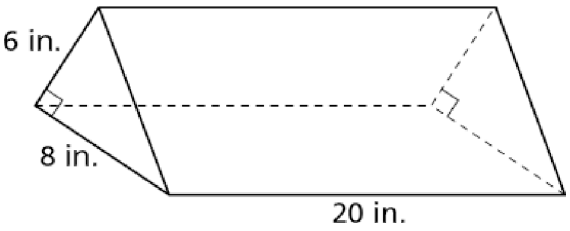
A. 38 square inches
B. 40 square inches
C. 60 square inches
D. 76 square inches

44. What is the surface area of the triangular prism represented below in square inches?



A. 102 sq. in.
B. 108 sq. in.
C. 96 sq. in.
D. 48 sq. in.

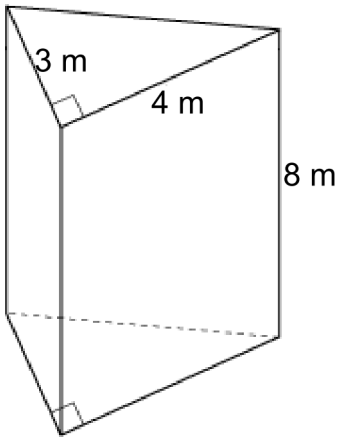
45. Look at the 3-dimensional figure.



What is the total surface area of the figure?

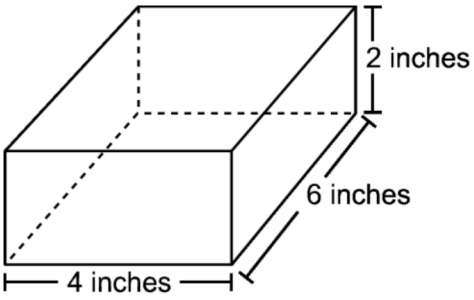
A. 328 in^2
B. 480 in^2
C. 504 in^2
D. 528 in^2

46. What is the total surface are of the triangular prism below?



A. 48 m^2
B. 68 m^2
C. 108 m^2
D. 120 m^2

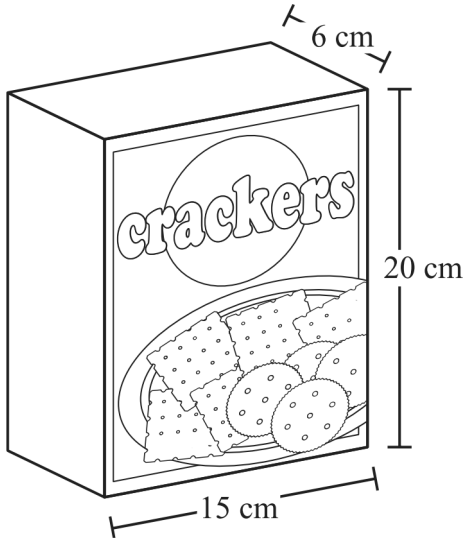
47. The diagram below shows a rectangular prism and its dimensions.



What is the surface area of the rectangular prism?

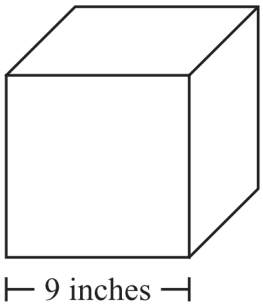
A. 40 square inches
B. 48 square inches
C. 64 square inches
D. 88 square inches

48. A box of crackers is in the shape of a rectangular prism and has the dimensions shown in the diagram below.



What is the surface area, in square centimeters, of the box of crackers?

49. Matthew made a wooden cube that has an edge length of 9 inches, as shown below.

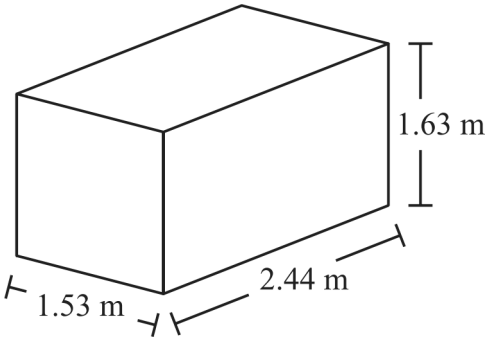


He painted half the faces of the cube red and the remaining faces yellow.

What is the surface area of the faces Matthew painted red?

A. 162 square inches
B. 243 square inches
C. 365 square inches
D. 486 square inches

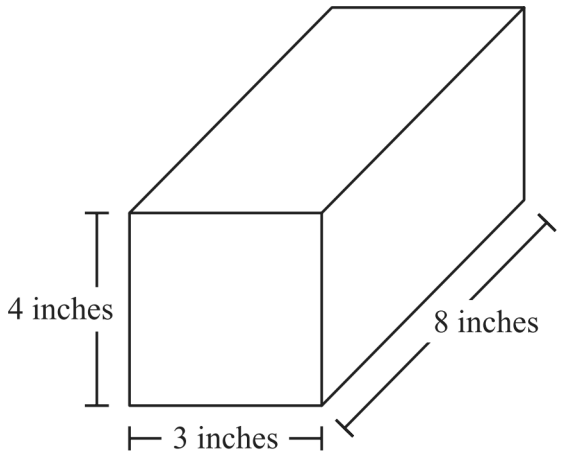
50. A shipping container is in the shape of a rectangular prism. The dimensions of the shipping container are shown in the diagram below.



Which of the following is closest to the total surface area of the container?

A. $6.09\ m^2$
B. $10.20\ m^2$
C. $12.94\ m^2$
D. $20.41\ m^2$

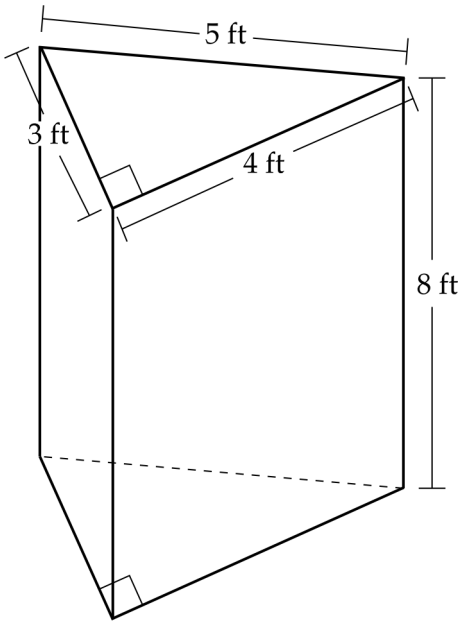
51. A block of cheese is in the shape of a rectangular prism. The block of cheese and its dimensions are shown below.



What is the total surface area of the block of cheese?

A. 68 square inches
B. 96 square inches
C. 136 square inches
D. 192 square inches

52. Monique plans to cover the three rectangular faces of the right triangular prism shown below with fabric.

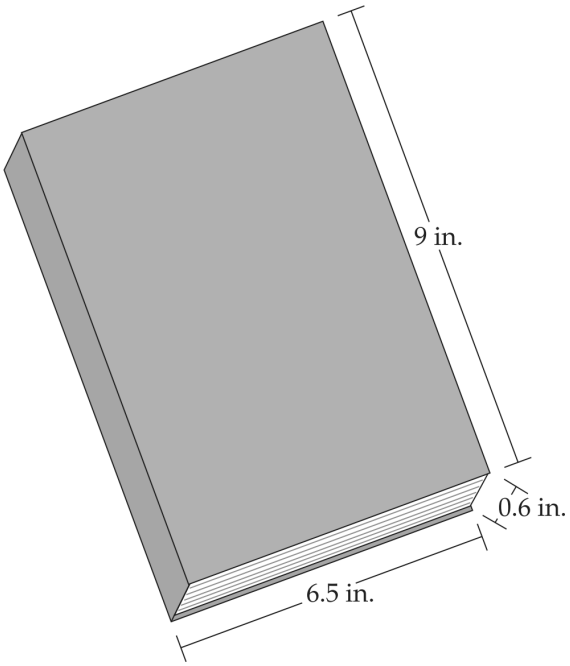


Note: The figure is not drawn to scale.

How many square feet of fabric will Monique need to cover the rectangular faces of the prism?

A. 56 square feet
B. 72 square feet
C. 96 square feet
D. 108 square feet

53. A book with dimensions 9 inches by 6.5 inches by 0.6 inch is shown below.

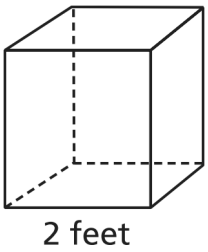


Note: The figure is not drawn to scale.

What is the area of the entire cover of the book? Round the answer to the nearest tenth of a square inch.

A. 120.9 square inches
B. 122.4 square inches
C. 124.8 square inches
D. 127.8 square inches

54. Use the figure below to answer the following question.

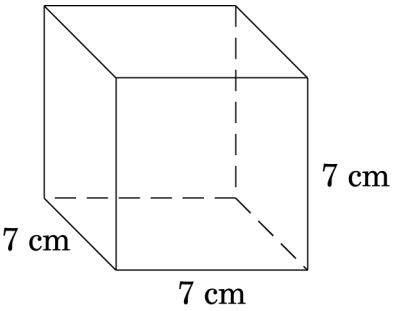


The figure above is a cube. What is the total surface area of the cube?

A. 6 square feet B. 8 square feet

C. 20 square feet D. 24 square feet

55. Donna has a cube that measures 7 cm on each edge.



What is the surface area of the cube?

A. 343 cm^2 B. 294 cm^2

C. 49 cm^2 D. 21 cm^2

56. Cindy is painting a rectangular prism. The width is 6 inches, the height is 5 inches, and the length is 7 inches. What is the surface area of the rectangular prism?

A. 107 square inches B. 154 square inches

C. 210 square inches D. 214 square inches

57. Sarah has a box in the shape of a rectangular prism. It is 8 inches wide by 10 inches long by 5 inches high. What is the surface area of Sarah's box?

A. 170 square inches B. 340 square inches

C. 400 square inches D. 480 square inches

58. A rectangular prism has a length of 7 inches, a width of 4 inches, and a height of 12 inches. What is its surface area?

A. 160 square inches B. 272 square inches

C. 320 square inches D. 336 square inches

59. The total surface area of a cube is 78 square inches. Which of the following measures is closest to the length of its edge?

A. 8.8 in. B. 8.6 in. C. 3.6 in. D. 3.4 in.

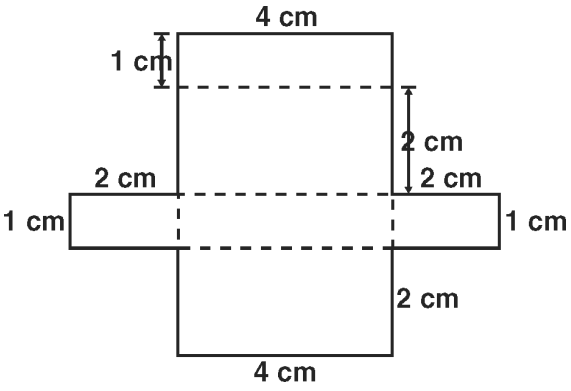
60. Jessie has an aquarium that is shaped like a right rectangular prism with the following dimensions:

- height: 15 inches
- width: 20 inches
- length: 30 inches

What is the lateral surface area of a right rectangular prism with the dimensions of Jessie's aquarium?

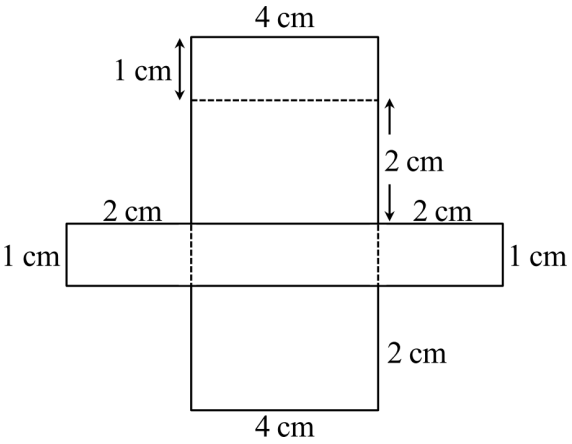
A. 260 sq. in.
B. 750 sq. in.
C. 1500 sq. in.
D. 9000 sq. in.

61. What is the surface area of the box formed by the pattern below?



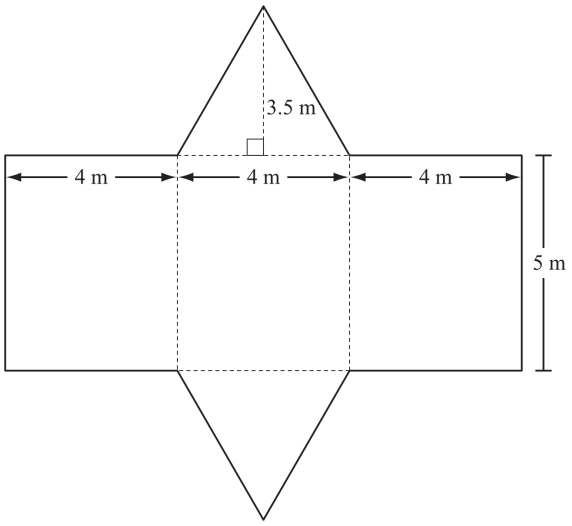
A. 28 cm^2
B. 24 cm^2
C. 14 cm^2
D. 8 cm^2

62. What is the surface area of the box formed by the pattern below?



A. 28 cm^2
B. 24 cm^2
C. 14 cm^2
D. 8 cm^2

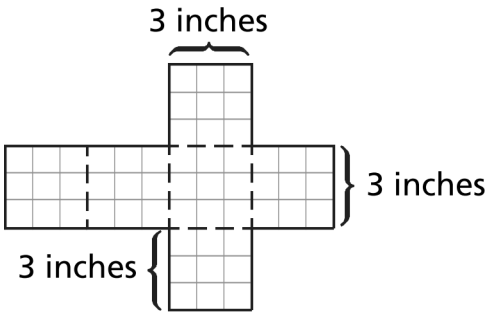
63. The net of a triangular prism and its dimensions are shown below.



What is the total surface area of the prism?

A. 54 m^2
B. 60 m^2
C. 74 m^2
D. 76 m^2

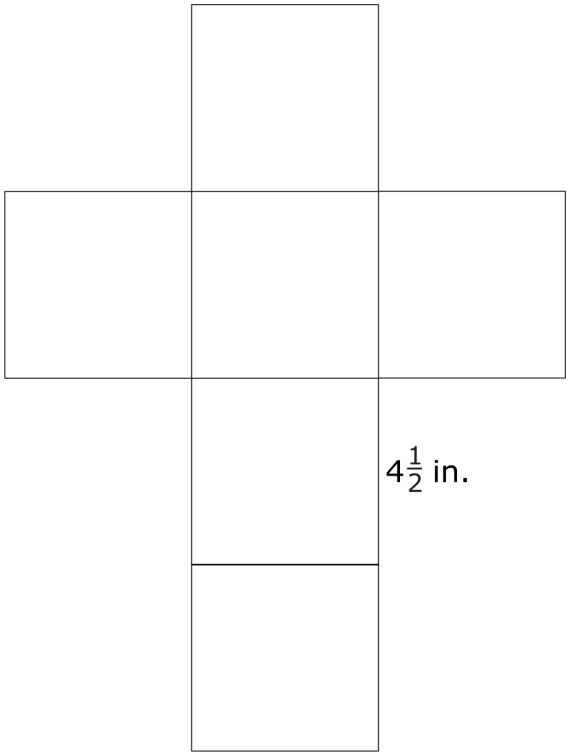
64. Use the figure below to answer the question.



Jason cut out the unfolded cube shown above. What is the total surface area of the cube?

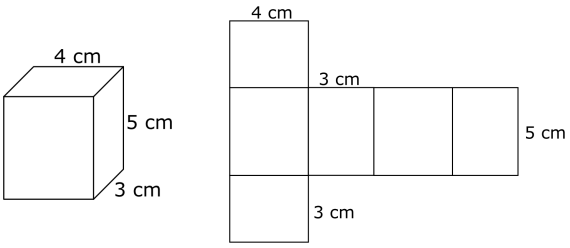
A. 27 square inches
B. 36 square inches
C. 45 square inches
D. 54 square inches

65. The net below is of a cube. What is the surface area of the cube?



A. $20\frac{1}{4}$ in.^{2}
B. 81 in.^{2}
C. $121\frac{1}{2}$ in.^{2}

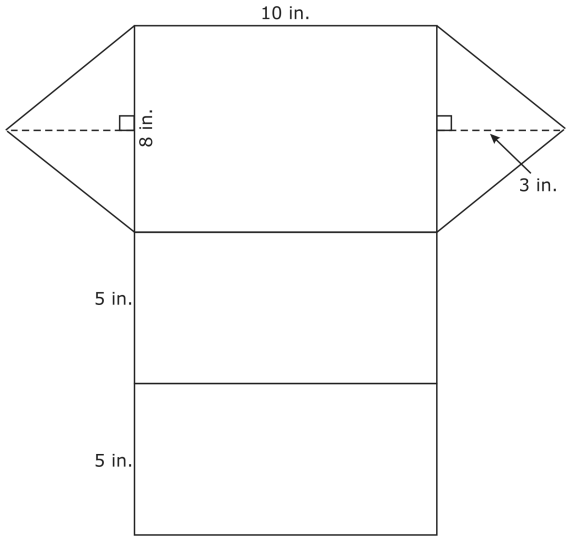
66. Use the figure and net to answer the question.



What is the surface area of the rectangular prism?

A. 12 sq. cm
B. 50 sq. cm
C. 60 sq. cm
D. 94 sq. cm

67. The net of a triangular right prism is shown below.



What is the surface area of the prism?

A. $204\,\text{in.}^2$

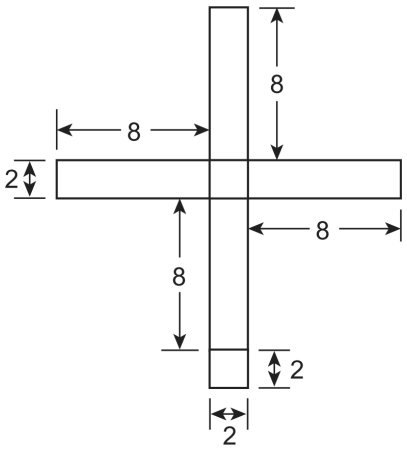
B. $228\,\text{in.}^2$

C. $240\,\text{in.}^2$

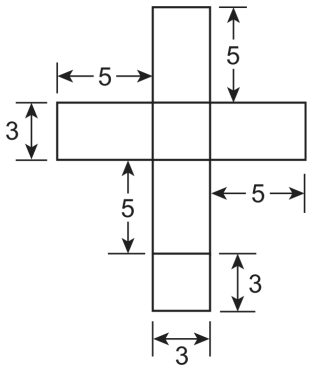
D. $288\,\text{in.}^2$

68. Which diagram is of a net of a rectangular prism with a surface area of 78 square units?

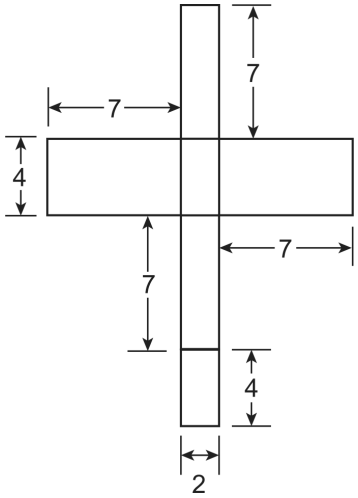
A.



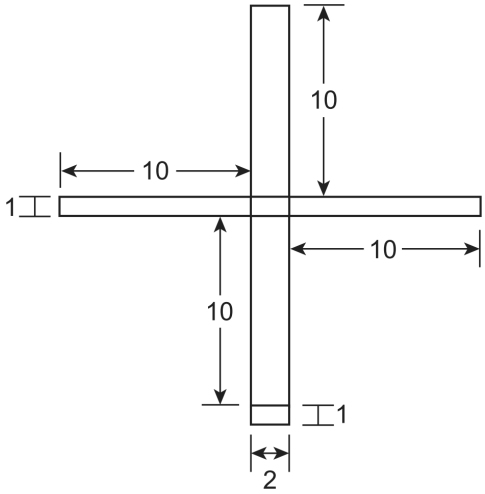
B.



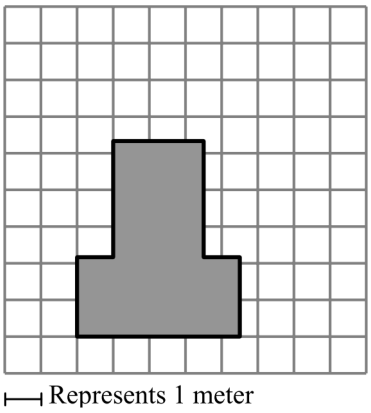
C.



D.

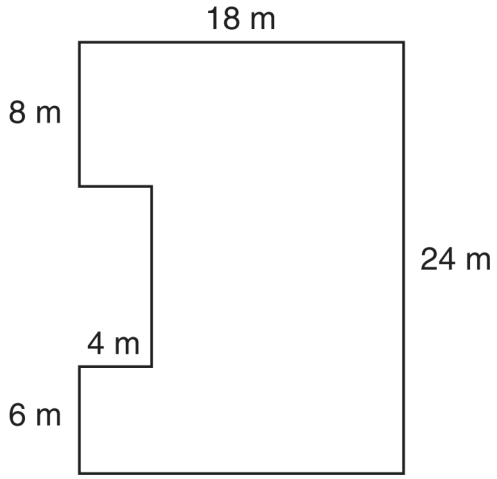


69. Which of the following is the *closest* to the perimeter of the shape?



A. 10 meters
B. 20 meters
C. 30 meters
D. 40 meters

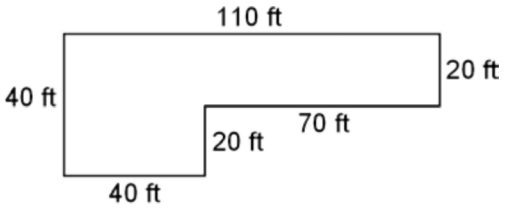
70. Look at this figure.



What is the perimeter of this figure?

A. 96 meters
B. 92 meters
C. 78 meters
D. 60 meters

71. A farmer needs to put up a fence around her pasture. How many *yards* of fencing will she need?



A. 300 yards
B. 100 yards
C. 75 yards
D. 50 yards