TEST NAME: **Geometry B**
TEST ID: **145697**
GRADE: **07 - Seventh Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **School Assessment**

Student: _____

Class: _____

Date: _____

1. Laura is building a fence around her pond. The pond has a diameter of 5 ft. Which is the minimum amount of fence Laura will need?

   A. 8 ft

   B. 16 ft

   C. 20 ft

   D. 25 ft

2. The circumference of a circle is 25 mm. What is the ***approximate*** radius of the circle?

   A. 4 mm

   B. 5 mm

   C. 8 mm

   D. 12 mm

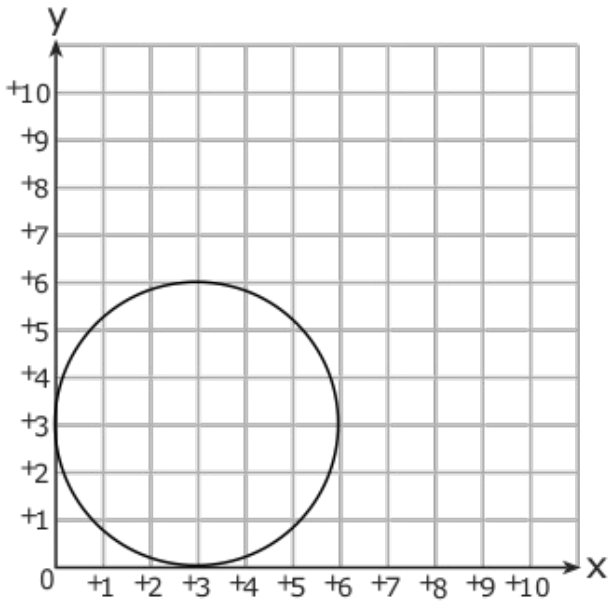
3. The radius of a circle is 12 cm. What is the ***approximate*** circumference of the circle?

   A. 75 cm

   B. 38 cm

   C. 24 cm

4. What is the ***approximate*** area of the circle below?



A. 19 units^2

B. 28 units^2

C. 32 units^2

5. A bicycle has a tire with a 20-inch diameter. Another bicycle has a tire with a 26-inch diameter. ***About*** how much farther will the larger tire roll in one revolution compared to one revolution of the smaller tire?

A. 6 inches

B. 9 inches

C. 12 inches

D. 19 inches

6. A clock face has a diameter of 14 inches. What is the area of the face of the clock in square inches?

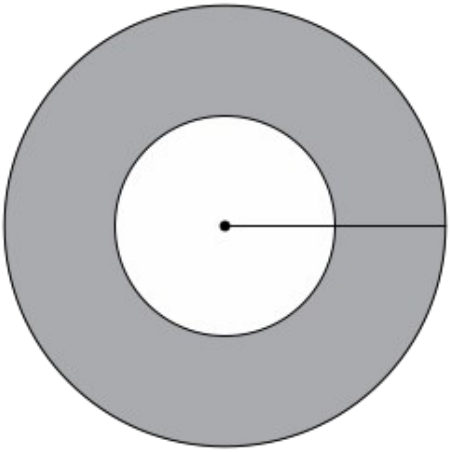
A. 7π

B. 14π

C. 28π

D. 49π

7. The radius of the larger circle is 5 meters. The radius of the smaller circle is 2.5 meters.



What is the ***approximate*** area of the shaded region of the larger circle?

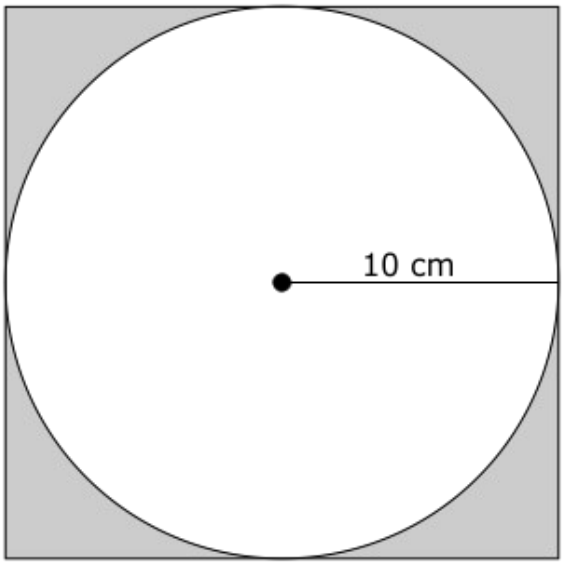
A. 5 meters^2

B. 20 meters^2

C. 59 meters^2

D. 79 meters^2

8. One side of the square below measures 20 cm.



What is the ***approximate*** area of the shaded region of the square?

A. $43\ cm^2$

B. $86\ cm^2$

C. $100\ cm^2$

D. $314\ cm^2$

9. The circumference of a circle is 44π centimeters (cm). What is the radius of the circle?

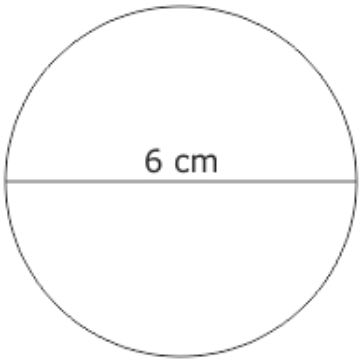
A. 11 cm

B. 22 cm

C. 44 cm

D. 88 cm

10. The circle below has a diameter of 6 cm.



What is the ***approximate*** area of the circle?

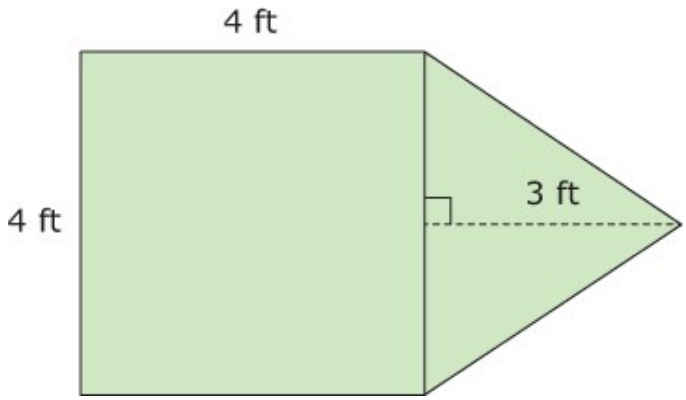
A. $38\ cm^2$

B. $36\ cm^2$

C. $28\ cm^2$

D. $19\ cm^2$

11. A shape is composed of a square and a triangle. The dimensions, in feet (ft), are shown below.



Which is the area of the shape in square feet (sq ft)?

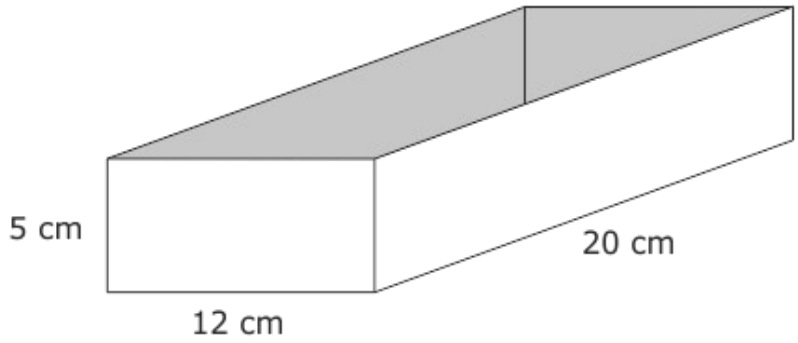
A. 19

B. 20

C. 22

D. 28

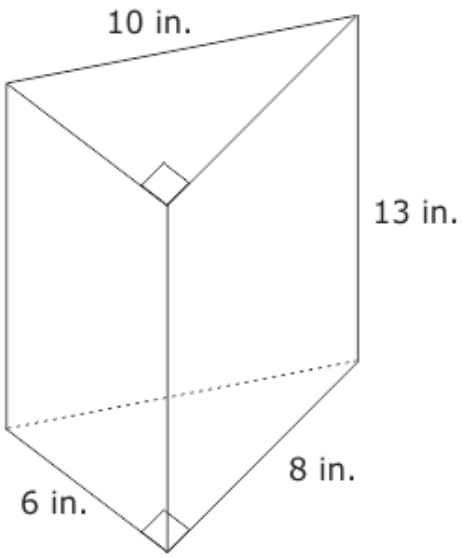
12. The top of the box below has been removed.



What is the surface area of the remaining box?

A. 560 cm^2
B. 800 cm^2
C. 1,200 cm^2

13. A triangular prism is shown below.



What is the volume of the triangular prism?

A. 624 $in.^3$
B. 480 $in.^3$
C. 312 $in.^3$

14. What is the surface area of a cube with an edge length of 5 inches?

A. 180 square inches

B. 150 square inches

C. 125 square inches

D. 25 square inches

15. Randy rented a rectangular storage shed with a volume of 357 ft.^{3} The shed's height is $8\frac{1}{2}$ ft, and the width is 6 ft. What is the length of the shed?

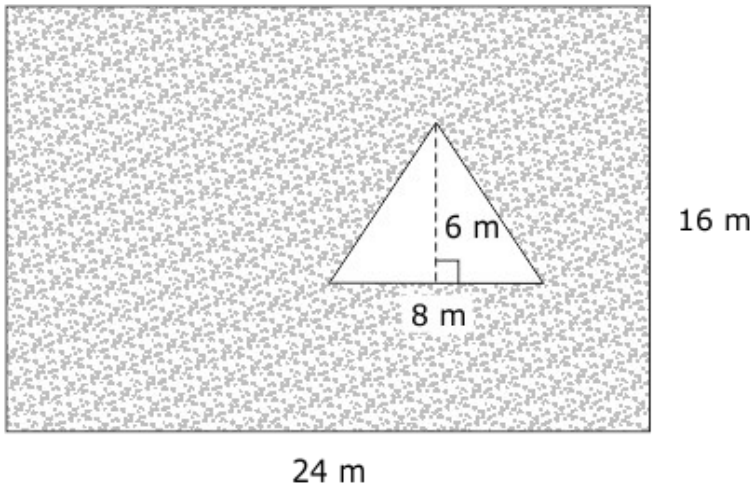
A. 7 ft

B. 8 ft

C. 48 ft

D. 51 ft

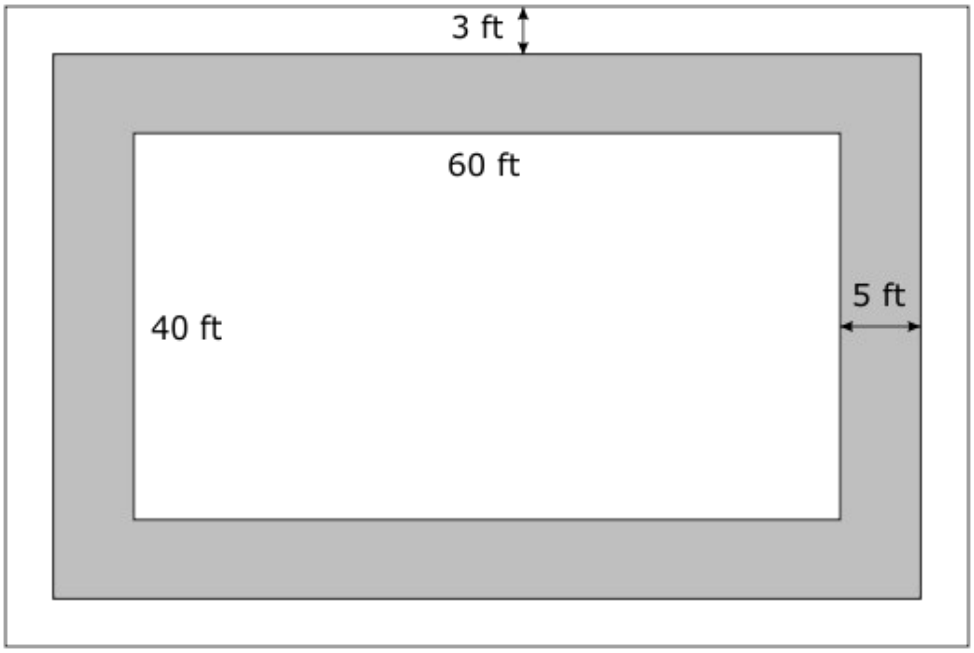
16. The figure below shows a triangular-shaped garden located inside a rectangular-shaped, grassy yard.



What is the area of the grassy yard?

A. 480 m^2
B. 384 m^2
C. 360 m^2
D. 336 m^2

17. Workers put a sidewalk completely around a building that measures 40 ft by 60 ft. The sidewalk is 5 ft away from each side of the building. The sidewalk is 3 ft wide.



What is the area of the sidewalk?

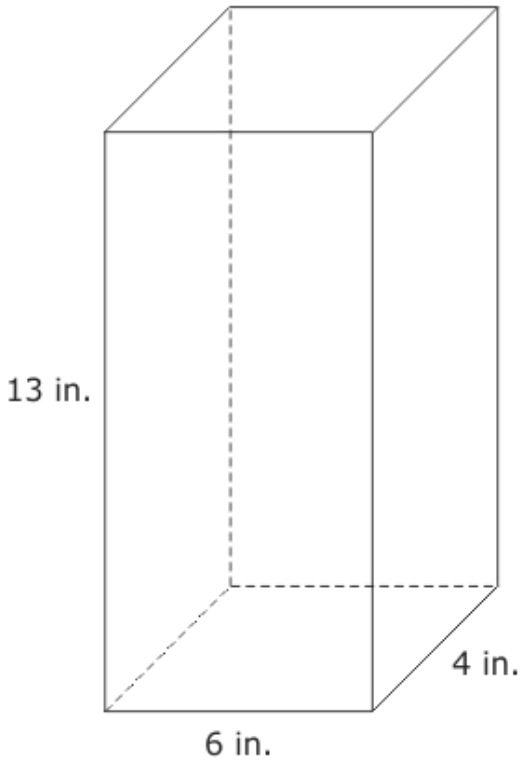
A. $264\ ft^2$

B. $756\ ft^2$

C. $3{,}500\ ft^2$

D. $4{,}256\ ft^2$

18. What is the surface area of the rectangular prism below?



A. 308 in.^2

B. 312 in.^2

C. 468 in.^2

19. Ryan wants to paint the four walls in his bedroom.

- The room measures 12 ft long, 10 ft wide, and 8 ft high.
- There are 2 doors that each measure 3 feet by 7 feet.
- There is 1 window that measures 3 feet by 4 feet.

If Ryan does not paint the doors and window, what is the total area he will paint?

A. 352 ft^2

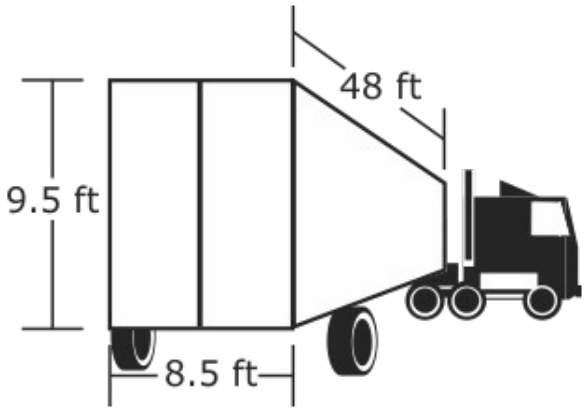
B. 298 ft^2

C. 122 ft^2

D. 66 ft^2

20.

The trailer on the back of the truck below is in the shape of a rectangular prism. The trailer is currently $\frac{1}{3}$ full.



What is the remaining volume of the trailer?

A. $1{,}292\ ft^3$

B. $1{,}938\ ft^3$

C. $2{,}584\ ft^3$

D. $3{,}876\ ft^3$

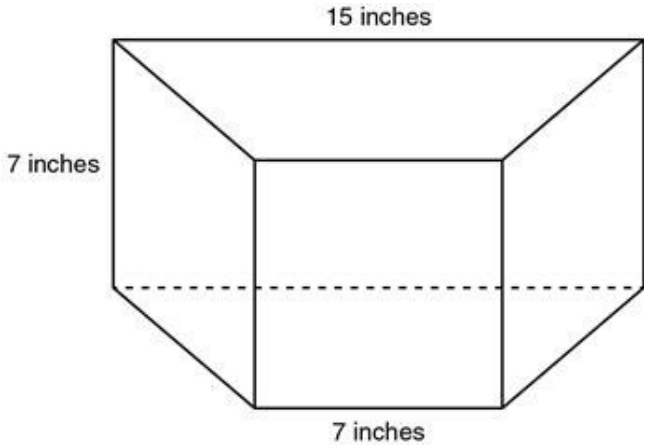
21. A fish tank, in the shape of a rectangular prism, has dimensions of 11 in. by 9 in. by 10 in. ***About*** how much water will the fish tank hold?

A. $100\ in.^3$

B. $500\ in.^3$

C. $1{,}000\ in.^3$

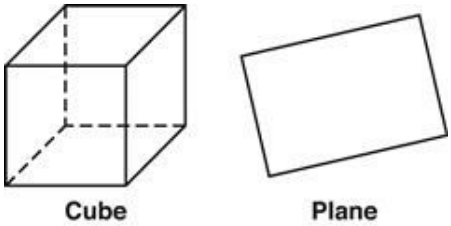
22. **A trapezoidal prism is shown below.**



Which polygon could not represent a cross section of this prism?

A. triangle
B. octagon
C. rectangle
D. trapezoid

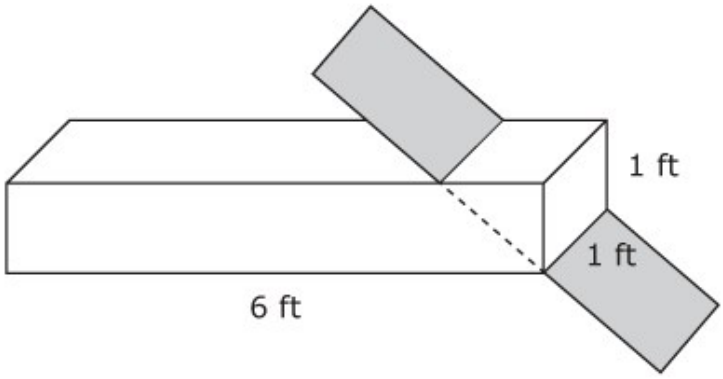
23. **A plane intersects a cube, passing through two opposite sides of the cube and remaining parallel to one adjacent side.**



What geometric shape will be formed from this intersection?

A. circle
B. square
C. triangle
D. parabola

24. A plane slices a right rectangular prism on a diagonal through two of the vertices of the prism.



What is the shape of the cross section?

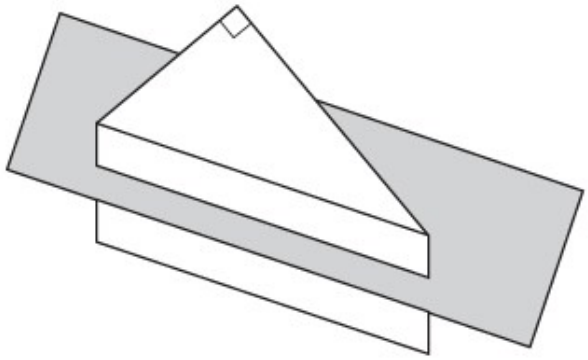
A. triangle

B. rhombus

C. rectangle

D. trapezoid

25. A plane slices through a prism parallel to the bases to create a cross section shaped like a right triangle.



If the prism stays in the same location, how could the plane be moved to create a cross section shaped like a rectangle?

A. move the plane so it slices through the prism perpendicular to the bases

B. move the plane so it slices through the prism intersecting the bases at 45° angles

C. move the plane up so it slices through the prism at a higher height still parallel to the base

D. move the plane down so it slices through the prism at a lower height still parallel to the base