

Math by Design
Flossville Park Math Connection Questions Answer Key

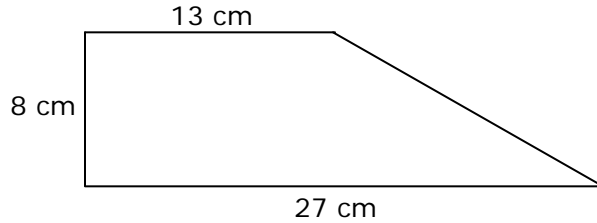
Safety First

A semicircle has a radius of 13 cm. What is the approximate area of the semicircle?

- A. 66.33 cm²
- B. 81.64 cm²
- C. 265.33 cm²
- D. 530.66 cm²

Safety First

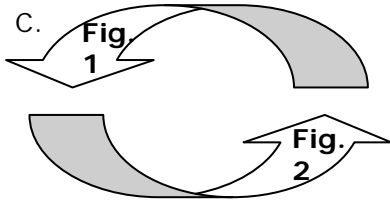
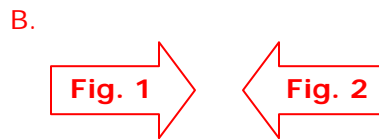
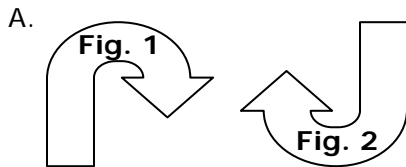
Find the area of the composite shape shown below.



- A. 64 cm²
- B. 104 cm²
- C. 160 cm²
- D. 216 cm²

BYOF

Which of the following diagrams shows a Figure 1 that is the reflection image of Figure 2?



Ahoy Matey

Suppose you are working on a coordinate plane (grid) that uses a scale for which each unit represents 20 meters. You must place a circle with a diameter of 80 meters. How many units will the diameter of the circle cover?

- A. 2 units
- B. 4 units
- C. 6 units
- D. 8 units

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Ahoy Matey

A right circular cylinder has a height of 3 meters and has a base with a radius of 5 meters. What is the approximate volume of this cylinder?

- A. 47.1 m^2
- B. 94.2 m^2
- C. 141.3 m^2
- D. 235.6 m^2

Ahoy Matey

An empty barrel has a circular base with a diameter of 1 meter and has a height of 2 meters. If it is filled with sand to a height of 25 cm, about how many cubic meters of sand are in the barrel?

- A. 0.196 m^3
- B. 0.785 m^3
- C. 78.5 m^3
- D. 19.6 m^3

Ahoy Matey

An empty coffee can base has a diameter of 15 cm and the can has a height of 30 cm. If it is filled with water to a height that is 5 cm from the top of the can, about how many liters of water are in the can? (1 liter of water has the same volume as 1,000 cubic centimeters.)

- A. 1.1 L
- B. 4.4 L
- C. 5.6 L
- D. 17.6 L

Who's Hungry

A segment with endpoints at (3, 2) and (6, 5) is drawn on a coordinate plane. After a rotation of 180 degrees about the origin, what are the coordinates of the endpoints of the segment?

- A. (2, 3) and (5, 6)
- B. (-3, -2) and (-6, -5)
- C. (2, -3) and (5, -6)
- D. (-3, 2) and (-6, 5)

Alley Oops

What is the area of a rectangular region that is 80 cm long and 50 cm wide?

- A. 130 cm
- B. 260 cm
- C. 400 cm^2
- D. 4000 cm^2

Alley Oops

A right triangle has a base 42 cm long and has a height of 28 cm. What is the length of the hypotenuse of the triangle to the nearest hundredth of a cm?

- A. 8.37 cm
- B. 25.48 cm
- C. 50.48 cm
- D. 70.00 cm

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Alley Oops

Point A has coordinates (3, -2) on a coordinate plane. Point A is translated 6 units to the right and 4 units up. What are the coordinates of the image of point A?

- A. (-3, 2)
- B. (-3, -6)
- C. **(9, 2)**
- D. (9, -6)

Light the Way

A right triangle has a base 12 meters long and has a height of 2 meters. What is the length of the hypotenuse of the triangle to the nearest hundredth of a meter?

- A. 3.74 m
- B. 10.20 m
- C. 11.92 m
- D. **12.17 m**