

- 1 A square has an area of 150 square centimeters. Which of the following measures is closest to the length of one of its sides?

A. 11.8 cm
B. 12.2 cm
C. 12.7 cm
D. 13.5 cm

Mark your answer here: 1. (A)(B)(C)(D)

- 2 Rectangle $ABCD$ is similar to rectangle $EFGH$.

- The length of each side of rectangle $EFGH$ is 2.4 times the length of the corresponding side of rectangle $ABCD$.
- The perimeter of rectangle $ABCD$ is 120 feet.

What is the perimeter of rectangle $EFGH$?

A. 288 feet
B. 345.6 feet
C. 576 feet
D. 691.2 feet

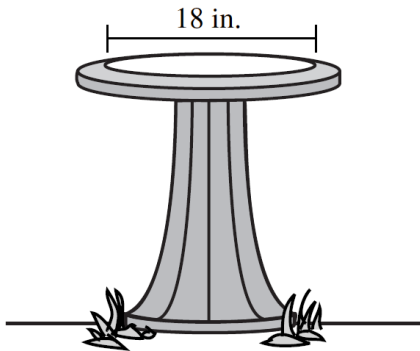
Mark your answer here: 2. (A)(B)(C)(D)

- 3 Which of the following measures is closest to the radius of a circle with a circumference of 132 centimeters?
A. 13 cm
B. 21 cm
C. 42 cm
D. 44 cm

Mark your answer here: 3. (A)(B)(C)(D)

- 4 The bowl of a circular birdbath has an inside diameter of 18 inches, as shown in the drawing below.

Mark your answer here: 4. (A)(B)(C)(D)



When the bowl of the birdbath is full of water, which of the following is closest to the area of the top surface of water?

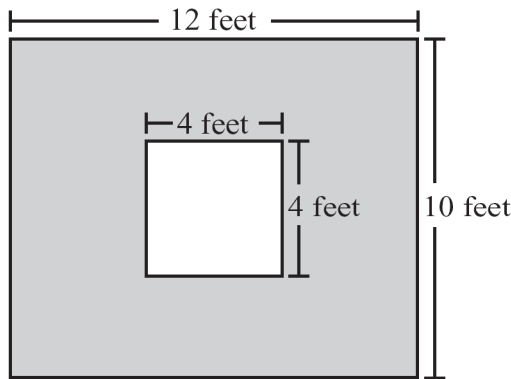
- A. 1017 sq. in.
- B. 254 sq. in.
- C. 113 sq. in.
- D. 57 sq. in.



- 5 Which of the following is closest to the area of a circle that has a diameter of 8 centimeters?
- A. 12.56 cm²
 - B. 25.12 cm²
 - C. 50.24 cm²
 - D. 200.96 cm²

Mark your answer here: 5. (A)(B)(C)(D)

- 6 The diagram below shows a square in the interior of a rectangle.



Based on the dimensions in the diagram, what is the area, in square feet, of the shaded region of the rectangle?

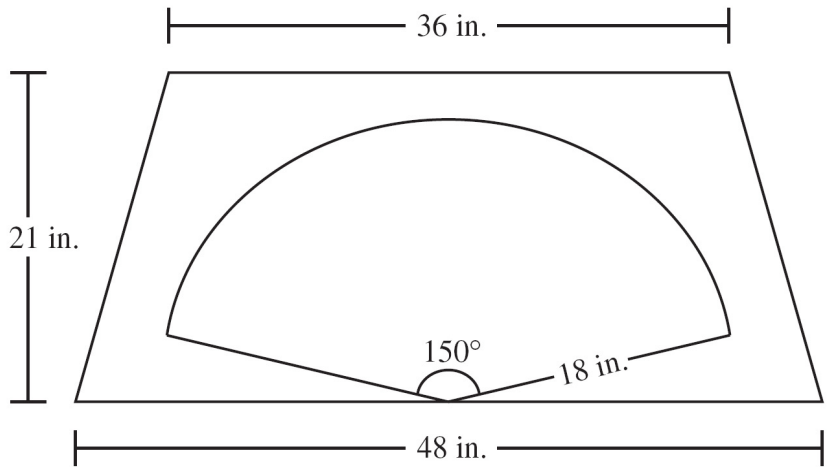
Write your answer here:



Directions: For the problem below, use a separate piece of paper to write your answers. Your teacher will not count anything you write on this page.

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The rear window of Alex’s van is shaped like a trapezoid with an upper base measuring 36 inches, a lower base measuring 48 inches, and a height of 21 inches. An 18-inch rear window wiper clears a 150° sector of a circle on the rear window, as shown in the diagram below.



- a. What is the area, in square inches, of the entire trapezoidal rear window? Show or explain how you got your answer.
- b. What fractional part of a complete circle is cleared on the rear window by the 18-inch wiper? Show or explain how you got your answer.
- c. What is the area, in square inches, of the part of the rear window that is cleared by the wiper? Show or explain how you got your answer.
- d. What percent of the area of the entire rear window is cleared by the wiper? Show or explain how you got your answer.

