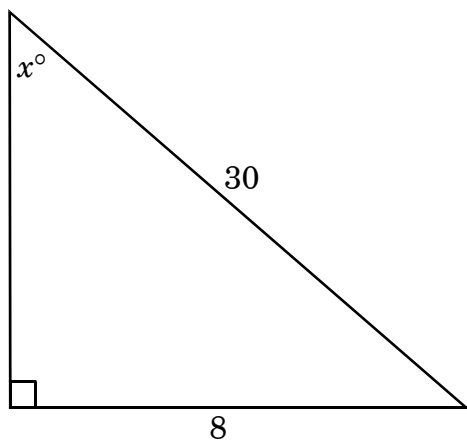


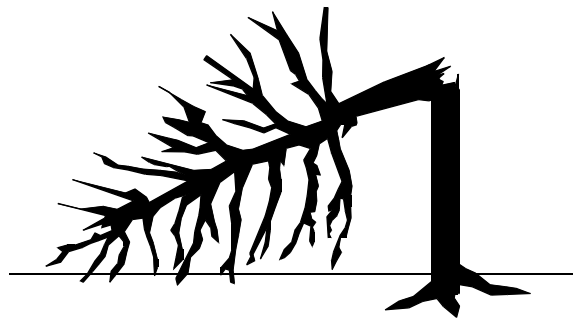
1. A right triangle is shown below.



What is the *approximate* value of  $x$ ?

- A 14.9
- B 15.5
- C 74.5
- D 75.1

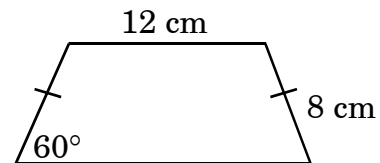
2. A dead tree was struck by lightning, causing it to fall over at a point 10 ft up from the base of the tree.



If the fallen treetop forms a  $40^\circ$  angle with the ground, *about* how tall was the tree originally?

- A 13 ft
- B 16 ft
- C 23 ft
- D 26 ft

3. What is the area of the trapezoid?

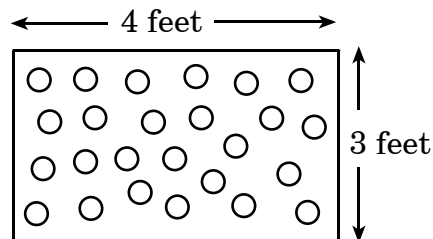


- A  $83.1 \text{ cm}^2$
- B  $110.9 \text{ cm}^2$
- C  $128.0 \text{ cm}^2$
- D  $192.0 \text{ cm}^2$

4. An inflated round balloon with radius  $r = 50$  centimeters holds approximately 523,600 cubic centimeters of air. When the balloon is contracted such that the radius is  $\frac{2}{3}$  the original size, what is the **approximate** volume of the partially deflated balloon?
- A  $1.94 \times 10^4 \text{ cm}^3$
- B  $1.55 \times 10^5 \text{ cm}^3$
- C  $1.75 \times 10^5 \text{ cm}^3$
- D  $3.49 \times 10^5 \text{ cm}^3$

5. A point is randomly selected on  $\overline{XY}$ . What is the probability that it will be closer to the midpoint of  $\overline{XY}$  than to either  $X$  or  $Y$ ?
- A  $\frac{1}{4}$
- B  $\frac{1}{3}$
- C  $\frac{1}{2}$
- D  $\frac{3}{4}$

6. To win a carnival game, Keisha must throw a dart at a board that is 4 feet by 3 feet and hit one of the 25 circles on the board. The diameter of each circle is 4 inches.



**Approximately** what percent of the time will a randomly thrown dart that hits the board also hit a circle?

- A 18%
- B 26%
- C 63%
- D 73%

## End of Goal 1 Sample Items

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# Answers to EOC Mathematics Geometry Sample Items

## Goal 1

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**1. Objective 1.01**

Use the trigonometric ratios to model and solve problems involving right triangles.

**Thinking Skill:** Applying

**Correct Answer:** B

**2. Objective 1.01**

Use the trigonometric ratios to model and solve problems involving right triangles.

**Thinking Skill:** Analyzing

**Correct Answer:** D

**3. Objective 1.02**

Use length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures.

**Thinking Skill:** Applying

**Correct Answer:** B

**4. Objective 1.02**

Use length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures.

**Thinking Skill:** Analyzing

**Correct Answer:** B

**5. Objective 1.03**

Use length, area, and volume to model and solve problems involving probability.

**Thinking Skill:** Analyzing

**Correct Answer:** C

**6. Objective 1.03**

Use length, area, and volume to model and solve problems involving probability.

**Thinking Skill:** Integrating

**Correct Answer:** A