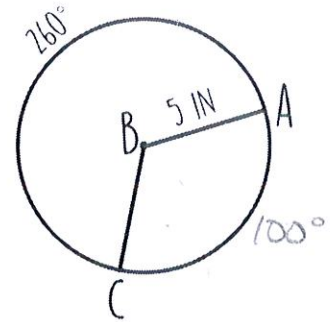


WARM-UP:

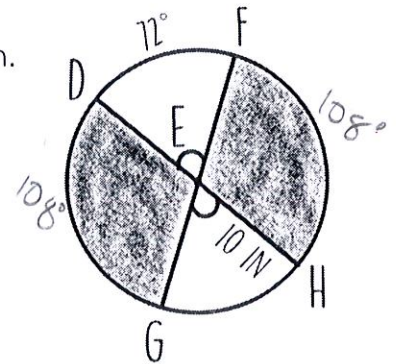
1. Answer the following questions. Leave your answers in terms of pi.

- A. Circumference of circle: $2\pi r = 10\pi \text{ in.}$
- B. Arc Length of \widehat{AC} : $\frac{100}{360} \cdot 2\pi r = \frac{25\pi}{9}$
- C. Area of circle: $\pi r^2 = 25\pi \text{ in}^2$
- D. Area of Sector ABC: $\frac{\pi r^2 \theta}{360} = \frac{125\pi \text{ in}^2}{18}$



2. Answer the following questions. Round your answers to the nearest tenth.

- A. Circumference of circle: $2\pi r = 20\pi \approx 62.8 \text{ m.}$
- B. Arc Length of \widehat{GH} : $\frac{72}{360} \cdot 2\pi r = 4\pi \text{ m} \approx 12.6 \text{ in.}$
- C. Area of circle: $\pi r^2 = 100\pi \text{ in}^2 = 314.2 \text{ m}^2$
- D. Area of total shaded region: $\frac{\pi r^2 \cdot 108}{360} = 94.2(2) = 188.5 \text{ in}^2$



3. Find the area of a circle if the circumference is 34π meters.

$$C = 2\pi r$$

$$34\pi = 2\pi r$$

$$\frac{34\pi}{2\pi} = \frac{2\pi r}{2\pi}$$

$$r = 17$$

$$A = \pi r^2$$

$$A = \pi (17)^2$$

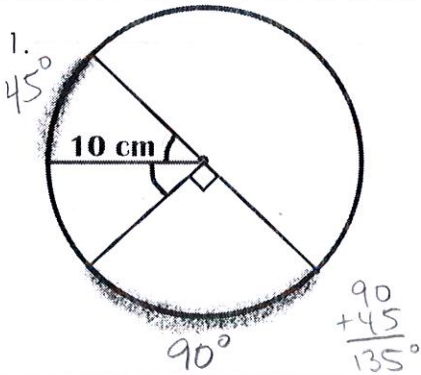
$$A = 289\pi \text{ m}^2$$

4. A circular pizza with a diameter of 16 inches is cut into 12 equal slices. If you eat two pieces of pizza, what is the total area of the pizza you ate? Leave your answer in terms of pi.

$d = 16$
 $r = 8$

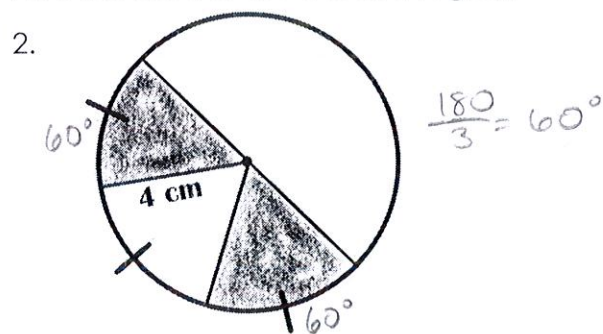
$$A = \frac{\pi r^2 \theta}{360} = \frac{\pi 8^2 \cdot 60}{360} = \frac{32\pi \text{ in}^2}{3}$$

Find the measure of the bolded arcs.



- A. In terms of pi: $\frac{135}{360} \cdot 2\pi r = \frac{15\pi}{2} \text{ cm}$
- B. Round to nearest tenth: 23.6 cm

Find the area of the shaded region.



- A. In terms of pi: $\frac{\pi 4^2 (120)}{360} = \frac{16\pi}{3} \text{ cm}^2$
- B. Round to nearest tenth: 16.8 cm²

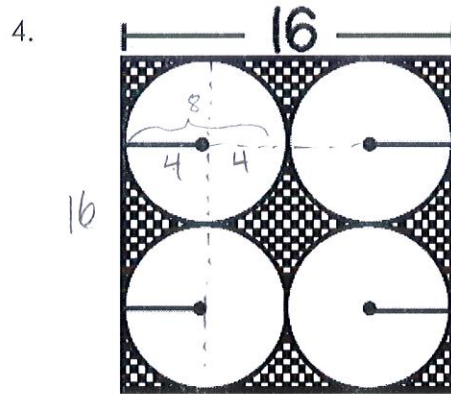
Find the area of the shaded regions below. Round your answer to the nearest tenth.



$$A_{\text{shaded region}} = A_{\text{large circle}} - A_{\text{small circle}}$$

$$\begin{aligned} A_s &= \pi 10^2 - \pi 5^2 \\ &= 100\pi - 25\pi \\ &= 75\pi \end{aligned}$$

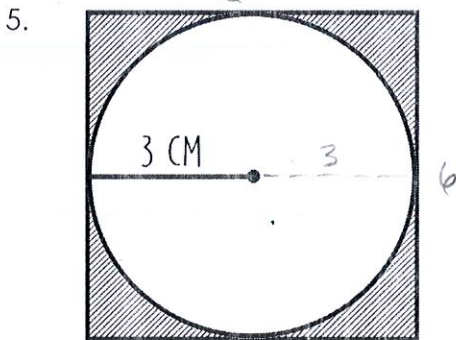
Shaded Region: $\boxed{235.6 \text{ units}^2}$



$$A_{\text{shaded region}} = A_{\text{square}} - 4(A_{\text{circle}})$$

$$\begin{aligned} A_s &= 16^2 - 4(\pi 4^2) \\ &= 256 - 64\pi \end{aligned}$$

Shaded Region: $\boxed{54.9 \text{ units}^2}$



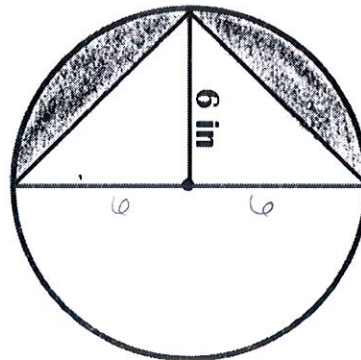
$$A_s = A_{\text{square}} - A_{\text{circle}}$$

$$A_s = 6^2 - \pi 3^2$$

$$A_s = 36 - 9\pi$$

Shaded Region: $\boxed{7.7 \text{ units}^2}$

6. Reminder: Area of a triangle = $\frac{1}{2}bh$



$$A_s = \text{Area of semicircle} - \text{Area of triangle}$$

$$A_s = \frac{\pi 6^2 180}{360} - \frac{1}{2}(12)(6)$$

$$A_s = 18\pi - 36$$

Shaded Region: $\boxed{20.5 \text{ in}^2}$