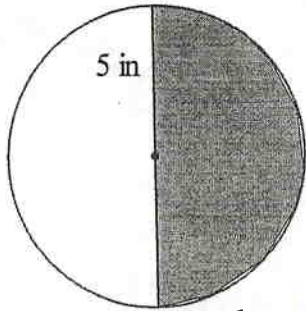


Find the area of the following shaded sectors. Then, find the length of the arc of the shaded sector.

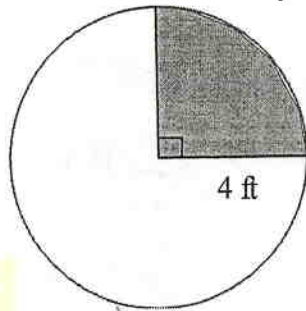
1.



Area: $\frac{180}{360} \cdot 5^2 \pi = \frac{25}{2} \pi \text{ in}^2$

Arc Length: $\frac{180}{360} \cdot 10\pi = 5\pi \text{ in}$

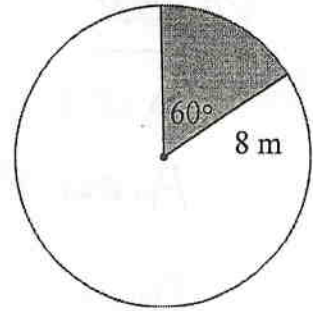
2.



Area: $\frac{90}{360} \cdot 4^2 \pi = 4\pi \text{ ft}^2$

Arc Length: $\frac{90}{360} \cdot 8\pi = \frac{1}{5} \pi \text{ ft}$

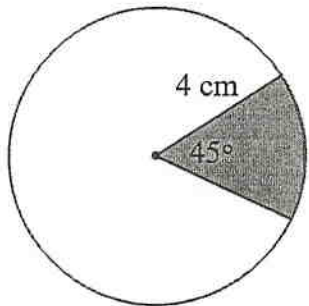
3.



Area: $\frac{60}{360} \cdot 8^2 \pi = \frac{32}{3} \pi \text{ m}^2$

Arc Length: $\frac{60}{360} \cdot 16\pi = \frac{8}{3} \pi \text{ m}$

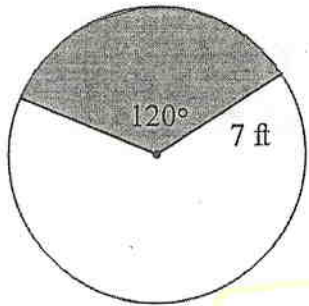
4.



Area: $\frac{45}{360} \cdot 16\pi = 2\pi \text{ cm}^2$

Arc Length: $\frac{45}{360} \cdot 8\pi = \pi \text{ cm}$

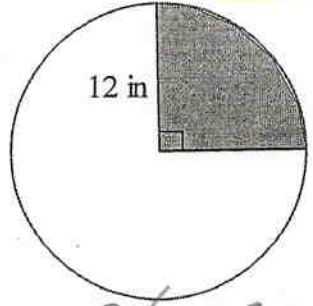
5.



Area: $\frac{120}{360} \cdot 7^2 \pi = \frac{49}{3} \pi \text{ ft}^2$

Arc Length: $\frac{120}{360} \cdot 14\pi = \frac{14}{3} \pi \text{ ft}$

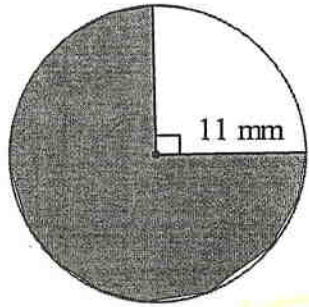
6.



Area: $\frac{90}{360} \cdot 12^2 \pi = 36\pi \text{ in}^2$

Arc Length: $\frac{90}{360} \cdot 24\pi = 6\pi \text{ in}$

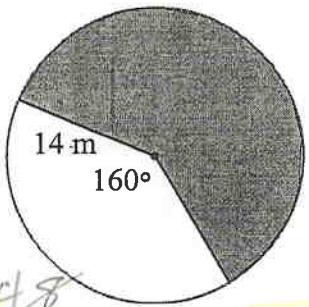
7.



Area: $\frac{90}{360} \cdot 121\pi = \frac{111}{4} \pi \text{ mm}^2$

Arc Length: $\frac{90}{360} \cdot 22\pi = \frac{11}{2} \pi \text{ mm}$

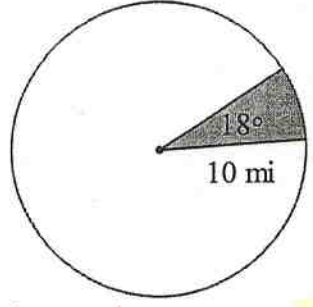
8.



Area: $\frac{160}{360} \cdot 14^2 \pi = \frac{784}{9} \pi \text{ m}^2$

Arc Length: $\frac{160}{360} \cdot 28\pi = \frac{112}{9} \pi \text{ m}$

9.



Area: $\frac{18}{360} \cdot 10^2 \pi = 5\pi \text{ mi}^2$

Arc Length: $\frac{18}{360} \cdot 20\pi = \pi \text{ mi}$