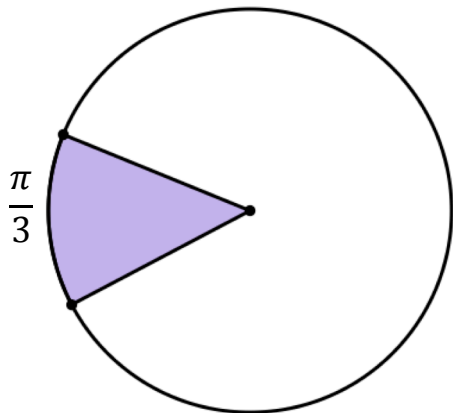**Geometry – Circles and their Properties**   Name _____

15e Homework: Area of a Sector of a Circle   Pd _____   Date _____
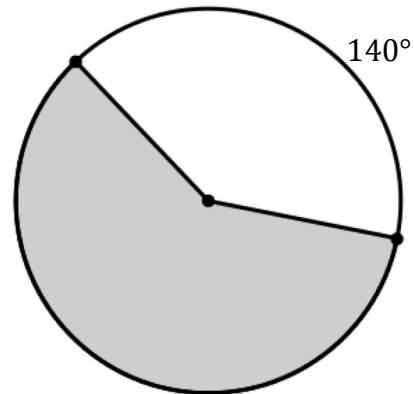
Express answers in exact form and as a decimal rounded to the nearest tenths.

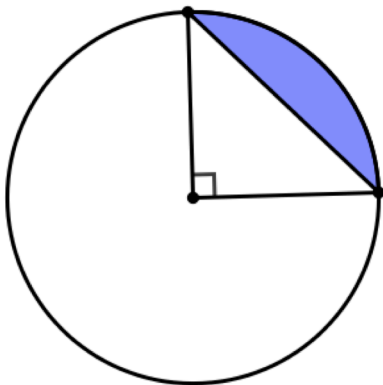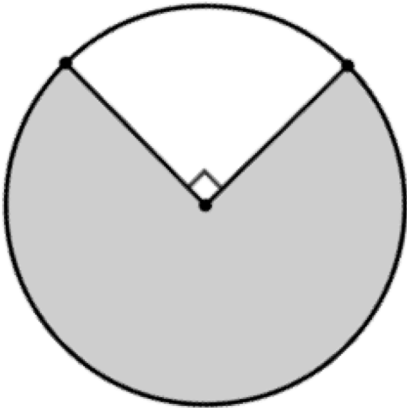**1.** The circle below has a radius of 4 m. Determine the area of the sector that is shaded.

$\dfrac{\pi}{3}$

2. The circle below has a radius of 25 cm. Determine the area of the sector that is shaded.
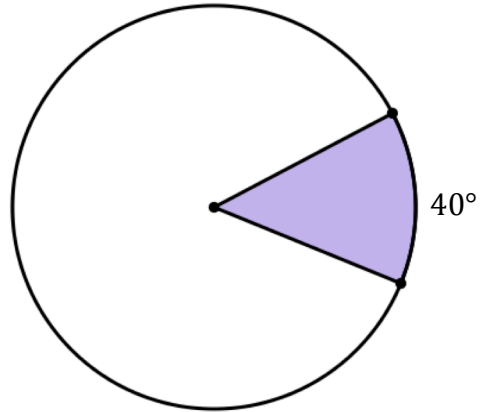

140°

3. The circle below has a radius of 30 ft., determine the area of shaded portion of the sector (i.e., the portion of the sector that is bounded by the chord and the circumference of the circle, as shown in the diagram below).

4. The circle below has a radius of 1 mile. Determine the area of the sector that is shaded.

5. If the sector that is shaded in the circle below has an area of 215 km.^{2}, what is the length of the radius of the circle?

40°

6. In the diagram below, the sides of the triangle inside of the circle are made up of two radii and a chord. The circle has a radius of 20 cm. and the triangle has a height of 12 cm. Determine the area of shaded portion of the sector (i.e., the portion of the sector that is bounded by the chord and the circumference of the circle, as shown in the diagram below).
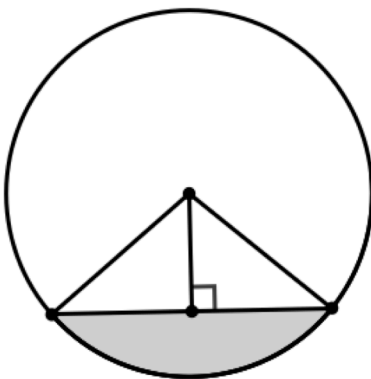

$$\frac{7\pi}{12}$$