Name _____ Hour _____

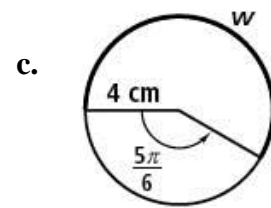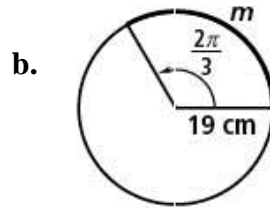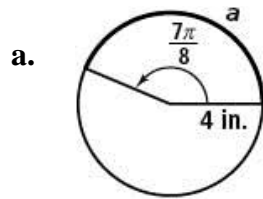# U6 – Arc Length

1. **Use each circle to find the length of the indicated arc. Round your answer to the nearest tenth.**

   a.
   $\frac{7\pi}{8}$
   a
   4 in.

   b.
   $\frac{2\pi}{3}$
   m
   19 cm

   c.
   w
   4 cm
   $\frac{5\pi}{6}$

2. **Find the measure of the central angle.**

   a. A circle has a radius of 5 in. and an arc of 10 in.

   b. A circle has a radius of 8 cm and an arc of 24 ft.

3. **Find the measure of the radius.**

   a. A circle has a central angle of $\dfrac{\pi}{3}$ and an arc length of 3.1 cm.

   b. A circle has a central angle of $\dfrac{11\pi}{6}$ and an arc length of 51.8 ft.

4. A pendulum swings through an angle of 1.8 radians. The distance the tip of the pendulum travels is 32 in. How long is the pendulum rounded to the nearest tenth?
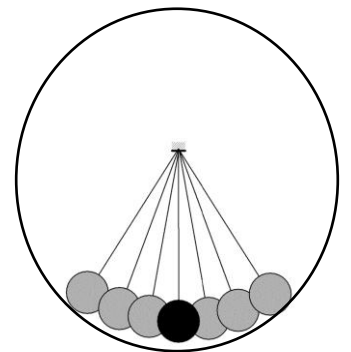
5. A pendulum of length 0.8 m swings through an angle of 1.5 radians. What distance does the tip of the pendulum travel rounded to the nearest tenth?