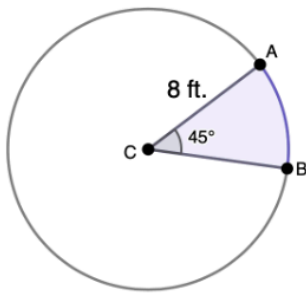


# CIRCLES ASSESSMENT REVIEW

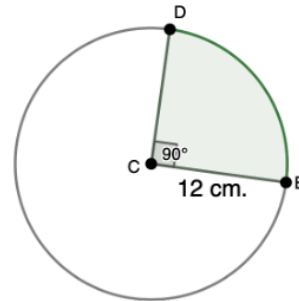
**Topic #1:** I can find the area of a sector or the length of an arc.

**Directions:** Assuming C is the center of each circle below, answer each of the following questions. Make sure you show all your steps. Leave your answers in exact form and include units.

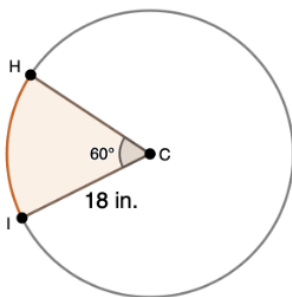
1. Find the area of the purple sector below. Then, find the length of arc AB.



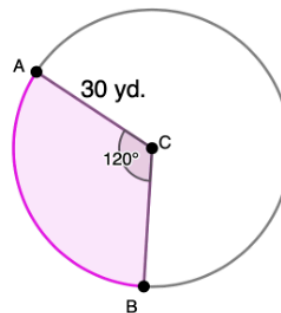
2. Find the area of the green sector below. Then, find the length of arc DE.



3. Find the area of the orange sector below. Then, find the length of arc HI.



4. Find the area of the pink sector below. Then, find the length of arc AB.



**Topic #2:** I can solve for the radius or diameter of a circle given the area of a sector or length of an arc.

**Directions:** Answer each of the questions below. Show the equation to need to use to solve, your steps for solving and your final answer. Leave your answer in exact form and include units.

1. If the length of an arc with a measure of  $72^\circ$  is  $24\pi$  ft, what is the diameter of the circle?

2. If the length of an arc with a measure of  $120^\circ$  is  $33\pi$  in, what is the radius of the circle?

3. If the area of a sector of a circle with a central angle of  $30^\circ$  is  $12\pi$  cm<sup>2</sup>, what is the radius of the circle?

4. If the area of a sector of a circle with a central angle of  $60^\circ$  is  $6\pi$  yd<sup>2</sup>, what is the diameter of the circle?

**Topic #3:** I can identify the radius and center of a circle given a circle equation in center-radius form.

**Directions:** Answer each of the questions below.

1. Write the equation of a circle with center (1,3) and a radius of 5.

2. Write the equation of a circle with a center of (-2,4) and a radius of 3.

3. What is the center and radius of the circle given by the equation below?

$$(x - 4)^2 + (y + 2)^2 = 36$$

4. What is the center and radius of the circle given by the equation below?

$$(x + 7)^2 + (y - 3)^2 = 20$$

**Topic #4:** I can identify the radius and center of a circle given a circle equation in general form.

**Directions:** Answer each of the questions below. Show all of your work.

1. Find the center and radius of the circle given by the equation below.

$$x^2 - 4x + y^2 + 6y = 23$$

2. Find the center and radius of the circle given by the equation below.

$$x^2 + 2x + y^2 - 8y = 32$$

3. Find the center and radius of the circle given by the equation below.

$$10x + y^2 + x^2 + 4y = 71$$

4. Find the center and radius of the circle given by the equation below.

$$y^2 + 16y + x^2 - 2x - 79 = 0$$