

# Unit 4

## HW: Circles and Arc Length

Name: \_\_\_\_\_

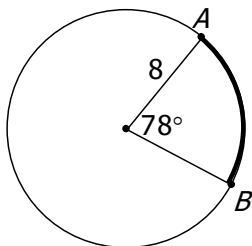
Period: \_\_\_\_\_ Date: \_\_\_\_\_

Fill in these formulas:

Formula for Circumference	Formula for Arc Length
$C =$	$L =$

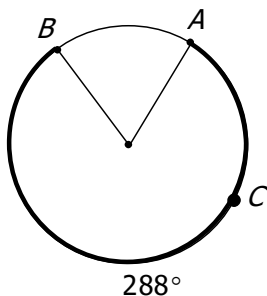
Give EXACT answers and answers rounded to 2 decimal places.

1.



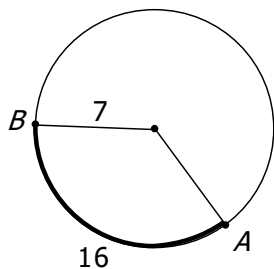
The radius of this circle is 8 cm, and the central angle for  $\widehat{AB}$  is  $78^\circ$ . Find the length of  $\widehat{AB}$ .

2.



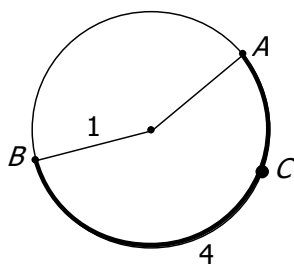
The radius of this circle is 10 ft. Find the length of  $\widehat{ACB}$ .

3.



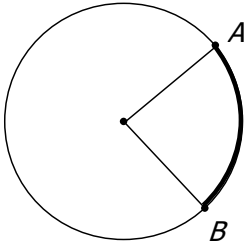
The radius of this circle is 7", and the length of  $\widehat{AB}$  is 16". Find  $m\widehat{AB}$ .

4.



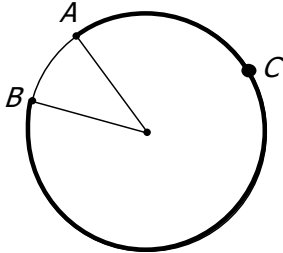
The radius of this circle is 1 foot, and the length of  $\widehat{ACB}$  is 4 ft. Find  $m\widehat{ACB}$ .

5.



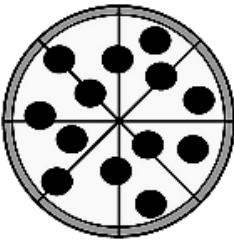
$m\widehat{AB} = 88^\circ$ , and the length of  $\widehat{AB}$  is 7.37 feet.  
Find the radius of the circle.

6.



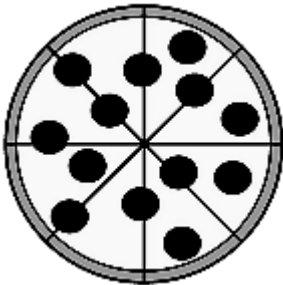
$m\widehat{ACB} = 321^\circ$ , and the length of  $\widehat{ACB}$  is 92 cm.  
Find the radius of the circle.

7.



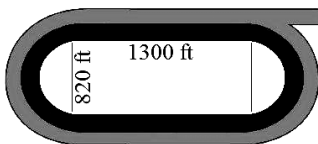
A pizza with a diameter of 14" is cut into 8 congruent slices.  
What is the length of the crust on each slice?

8.



Another (larger) pizza is cut into 8 congruent slices.  
If each slice has 7.07 inches of crust, what is the pizza's diameter?

9.



The inner edge of a horse racing track has two straight sides (1300 feet each) and two semicircular ends (diameter of 820 feet).  
Find the perimeter of the track's inner edge.