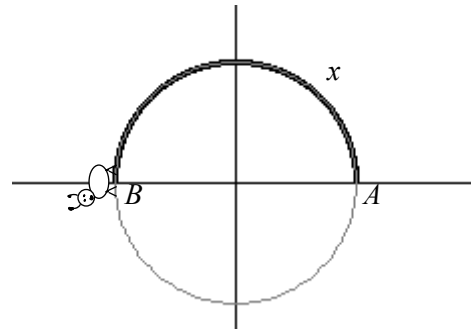


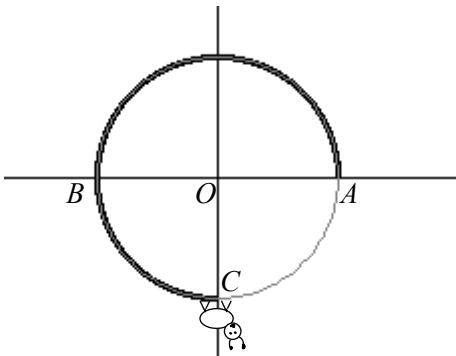
Bug on a Circular Track

Suppose a bug travels along the path of a circle.
We know that the distance from A to B is x units.



If the bug walks counterclockwise from A to C, express the distance the bug walks in terms of x .
What angle was spanned during the bug's trip?

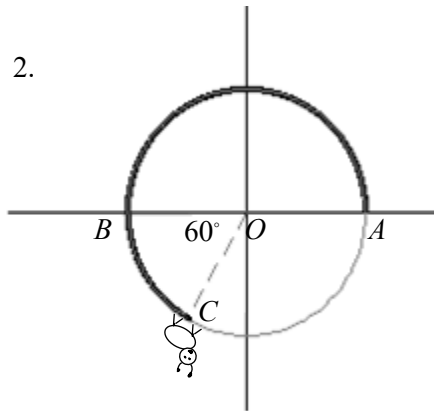
1.



$$m\widehat{ABC} = \frac{3x}{2}$$

What angle was spanned? 270°
 ($\frac{3x}{2} = x + \frac{1}{2}x$ since $\frac{1}{2}x$ corresponds to 90°)
 $270^\circ = 180^\circ + 90^\circ$

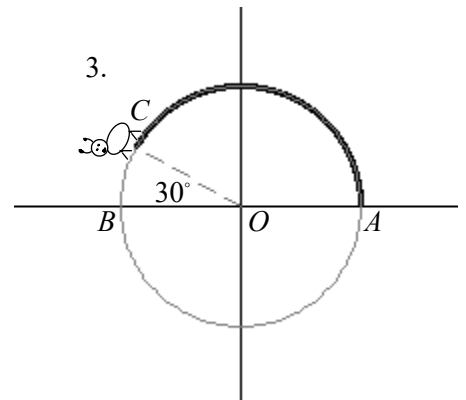
2.



$$m\widehat{ABC} = \frac{4x}{3}$$

What angle was spanned? 240°
 ($\frac{4x}{3} = x + \frac{1}{3}x$ since $\frac{1}{3}x$ corresponds to 60°)
 $240^\circ = 180^\circ + 60^\circ$

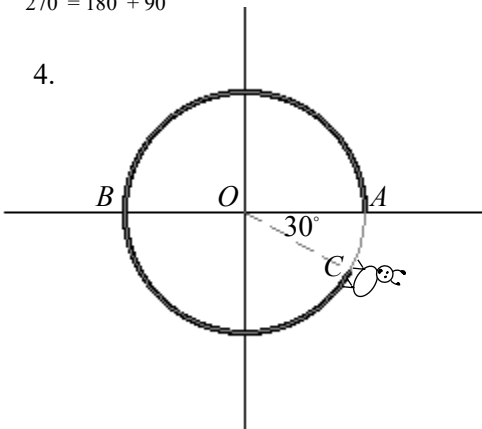
3.



$$m\widehat{AC} = \frac{5x}{6}$$

What angle was spanned? 150°
 ($\frac{5x}{6} = x - \frac{1}{6}x$ since $\frac{1}{6}x$ corresponds to 30°)
 $150^\circ = 180^\circ - 30^\circ$

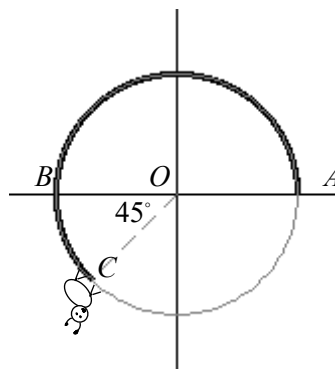
4.



$$m\widehat{ABC} = \frac{11x}{6}$$

What angle was spanned? 330°
 ($\frac{11x}{6} = 2x - \frac{1}{6}x = \frac{12}{6}x - \frac{1}{6}x$)
 $330^\circ = 360^\circ - 30^\circ$

5.

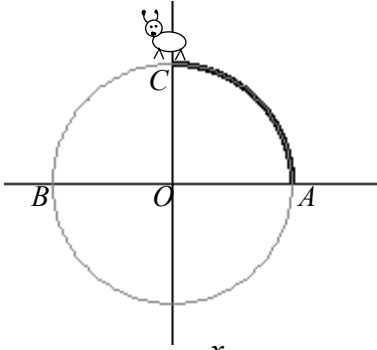


$$m\widehat{ABC} = \frac{5x}{4}$$

What angle was spanned? 225°
 ($\frac{5x}{4} = x + \frac{1}{4}x$ since $\frac{1}{4}x$ corresponds to 45°)
 $225^\circ = 180^\circ + 45^\circ$

Need more practice? Try the following.

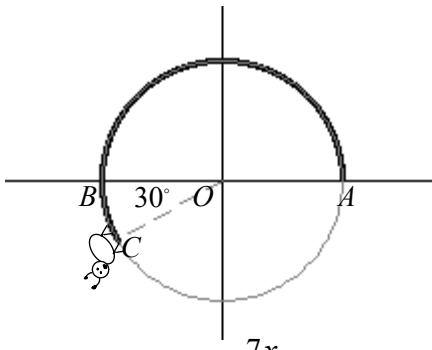
6.



$$m\widehat{AC} = \frac{x}{2}$$

What angle was spanned? 90°

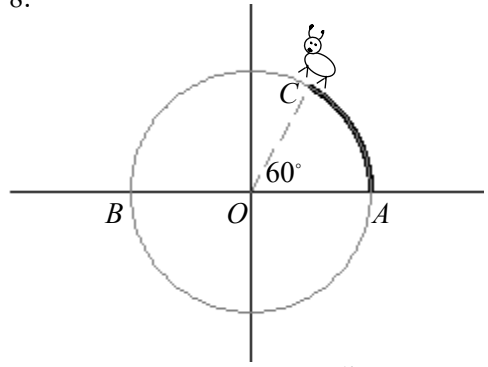
7.



$$m\widehat{ABC} = \frac{7x}{6}$$

What angle was spanned? 210°

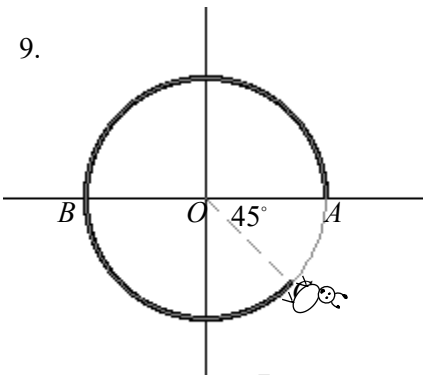
8.



$$m\widehat{AC} = \frac{x}{3}$$

What angle was spanned? 60°

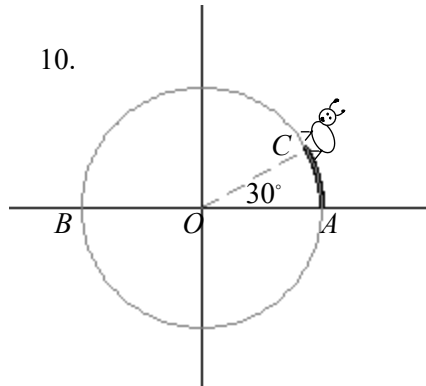
9.



$$m\widehat{ABC} = \frac{7x}{4}$$

What angle was spanned? 315°

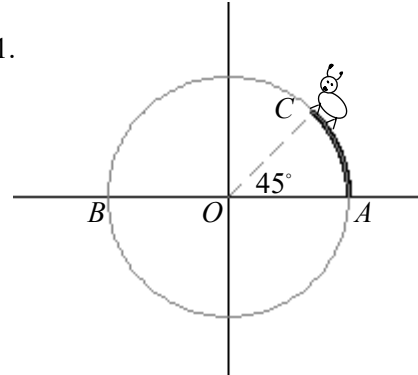
10.



$$m\widehat{AC} = \frac{x}{6}$$

What angle was spanned? 30°

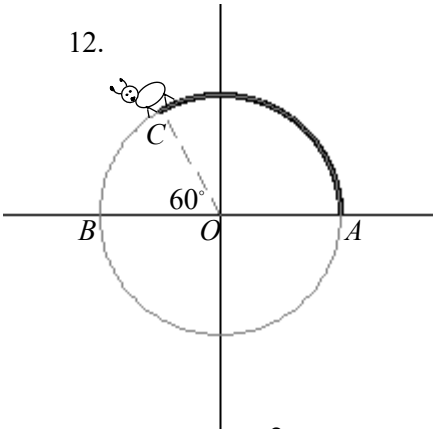
11.



$$m\widehat{AC} = \frac{x}{4}$$

What angle was spanned? 45°

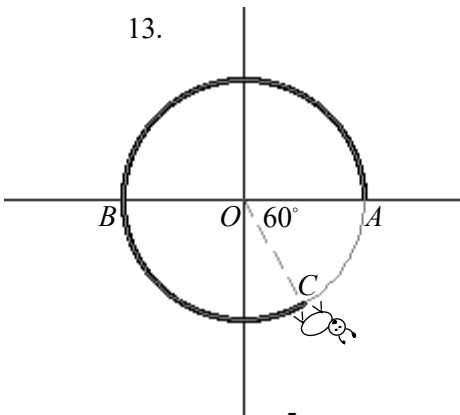
12.



$$m\widehat{AC} = \frac{2x}{3}$$

What angle was spanned? 120°

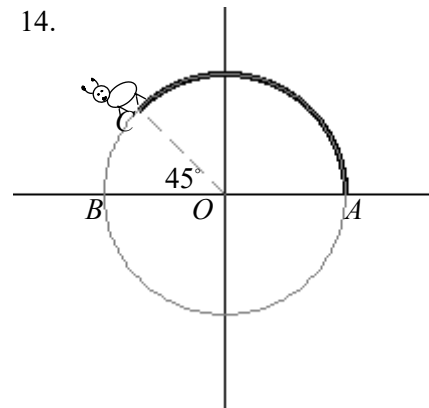
13.



$$m\widehat{ABC} = \frac{5x}{3}$$

What angle was spanned? 300°

14.



$$m\widehat{AC} = \frac{3x}{4}$$

What angle was spanned? 135°