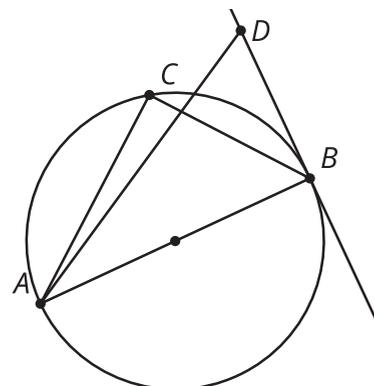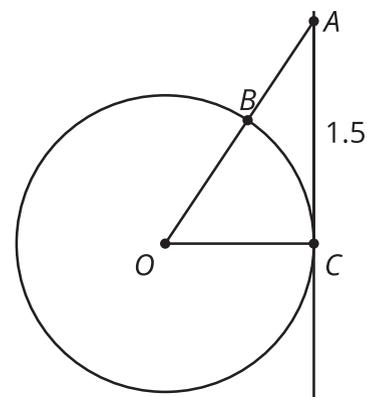# Lesson 3 Practice Problems

1. Line BD is tangent to a circle with diameter AB. Explain why the measure of angle BCA must equal the measure of angle ABD.

2. Line AC is perpendicular to the circle centered at O with radius 1 unit. The length of AC is 1.5 units. Find the length of segment AB.
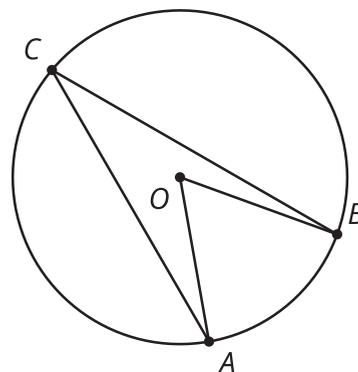
3. *Technology required.* Line PD is tangent to a circle of radius 1 inch centered at O. The length of PD is 1.2 inches. The length of AB is 1.7 inches. Which point on the circle is closest to point P?
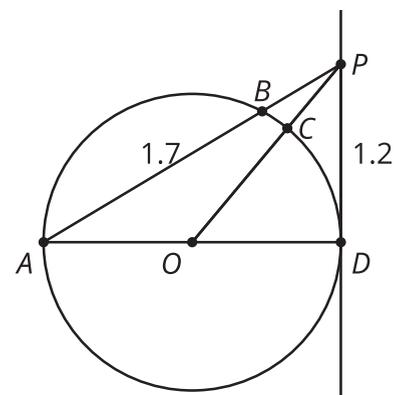
   A. point A

   B. point B

   C. point C

   D. point D

4. The arc from A to B not passing through C measures 50 degrees. Select **all** the true statements.

    A. Angle BCA measures 50 degrees.

    B. Angle BCA measures 25 degrees.

    C. Angle BOA measures 50 degrees.

    D. The arc from B to C not passing through A measures 180 degrees.

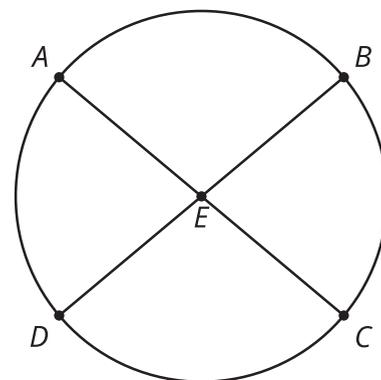   E. Angles CBO and CAO are congruent.

(From Unit 7, Lesson 2.)

5. Chords AC and DB intersect at point E. List 3 pairs of angles that *must* be congruent.
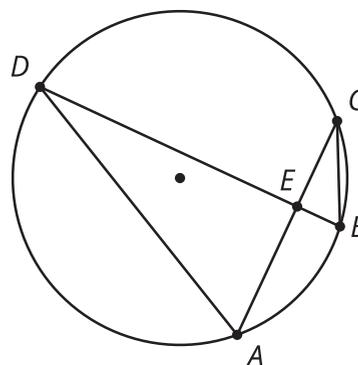
(From Unit 7, Lesson 2.)

6. The image shows a circle with diameters AC and BD. Prove that chords BC and AD (not drawn) are congruent.

7. The line represented by $y + 3 = -3(x + 6)$ is transformed by the rule $(x, y) \rightarrow (-x, -y)$. What is the slope of the image?

   A. 3

   B. $\frac{1}{3}$

   C. $-\frac{1}{3}$

   D. -3