### Lesson 7 Practice Problems

1. The point is the same distance from as it is from the -axis. What is the value of ?
2. A parabola is defined as the set of points the same distance from and the line . Select **all** points that are on this parabola.
3. Compare and contrast the parabolas with these definitions.
   * parabola A: points that are the same distance from and the -axis
   * parabola B: points that are the same distance from and the -axis
4. Find the center and radius of the circle represented by the equation .

* (From Unit 6, Lesson 6.)

1. Match each expression with the value needed in the box in order for the expression to be a perfect square trinomial.
   1. ​​​​
   2. ​​​​
   3. ​​​​
   4. 49
   5. 25

* (From Unit 6, Lesson 6.)

1. Write each expression as the square of a binomial.

* (From Unit 6, Lesson 5.)

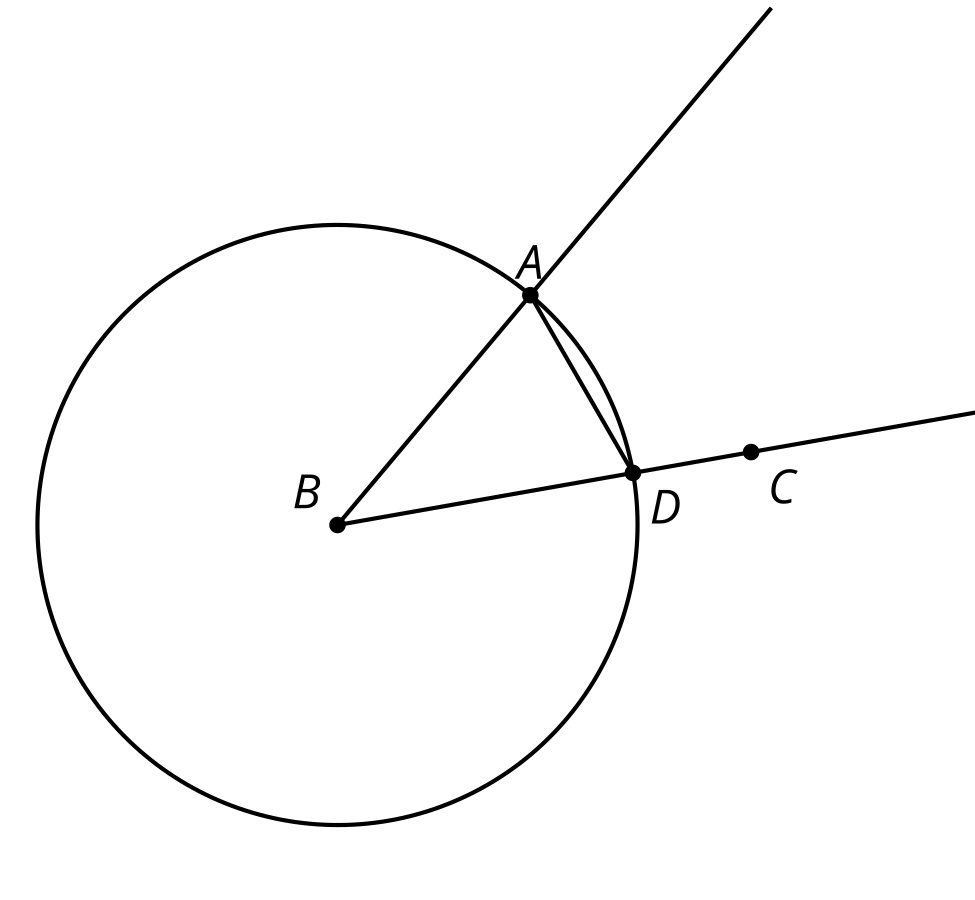
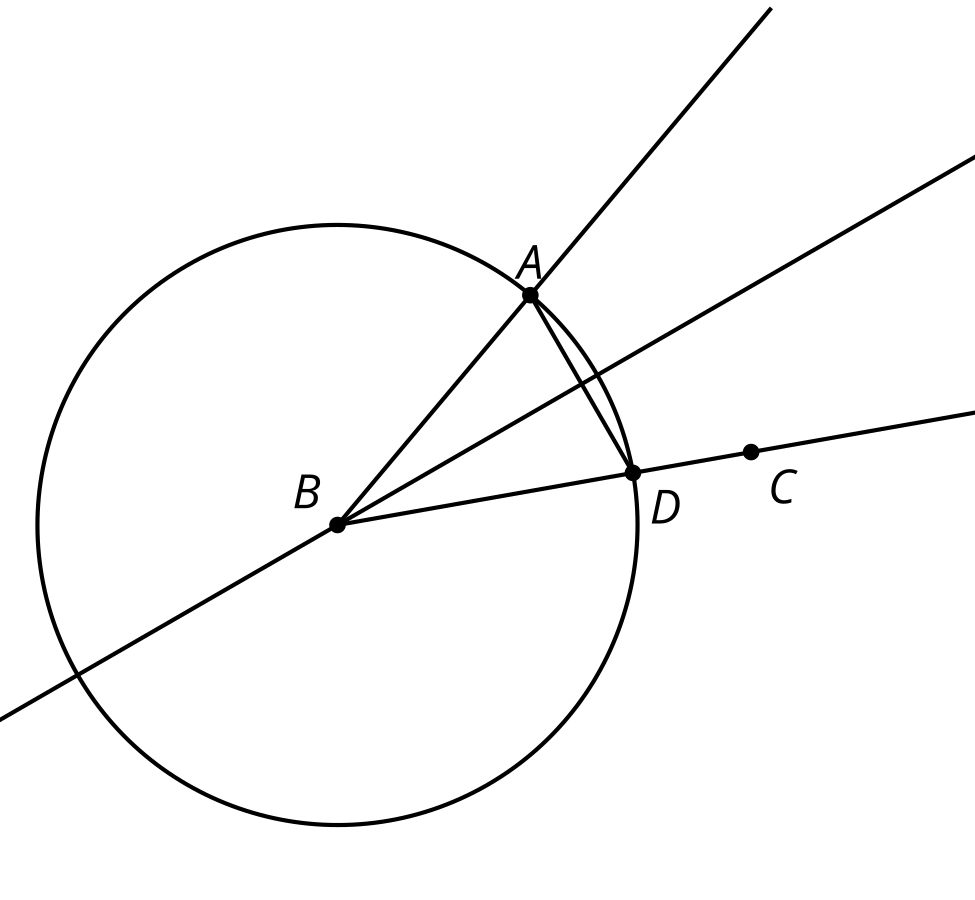
1. Write an equation of a circle that is centered at with a radius of 10.

* (From Unit 6, Lesson 4.)

1. The density of water is 1 gram per cm3. An object floats in water if its density is less than water’s density, and it sinks if its density is greater than water’s. Will a solid bar of soap shaped like a rectangular prism with mass 1.048 kilograms and dimensions 5.6 centimeters, 13 centimeters, and 16 centimeters float or sink? Explain your reasoning.

* (From Unit 5, Lesson 17.)

1. Jada has this idea for bisecting angle . First she draws a circle with center through . Then she constructs the perpendicular bisector of .

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* Does Jada's construction work? Explain your reasoning. You may assume that the perpendicular bisector of line segment is the set of points equidistant from and .
* (From Unit 1, Lesson 5.)



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