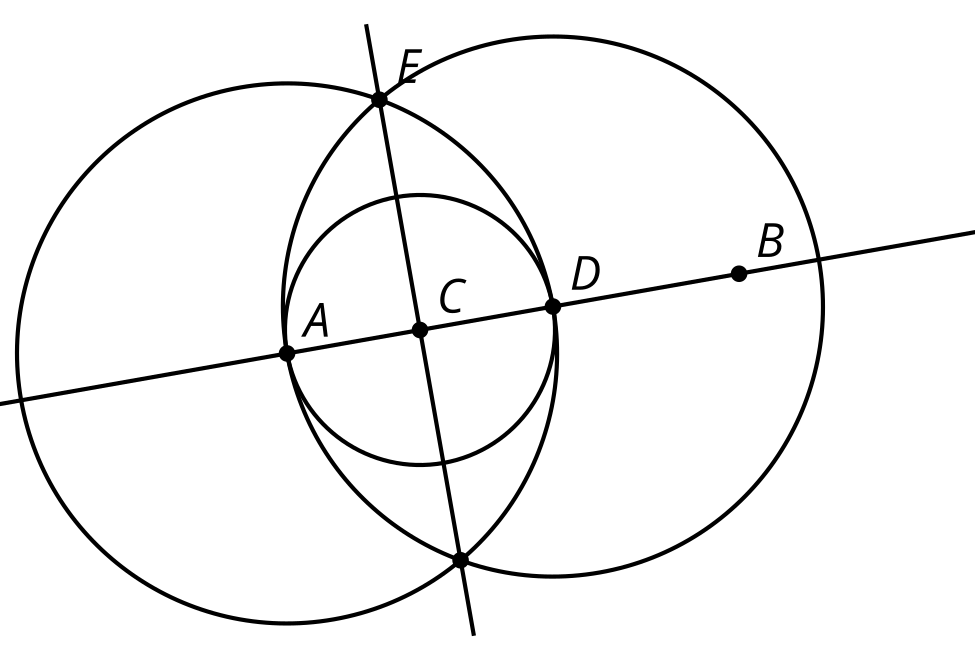
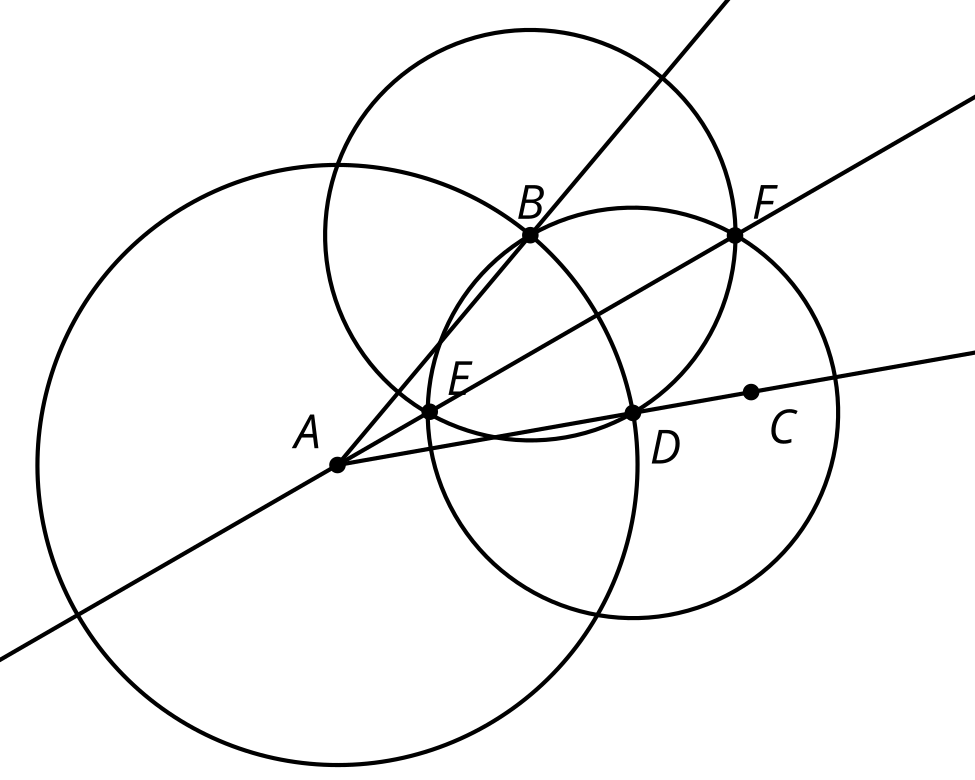
### Lesson 5 Practice Problems

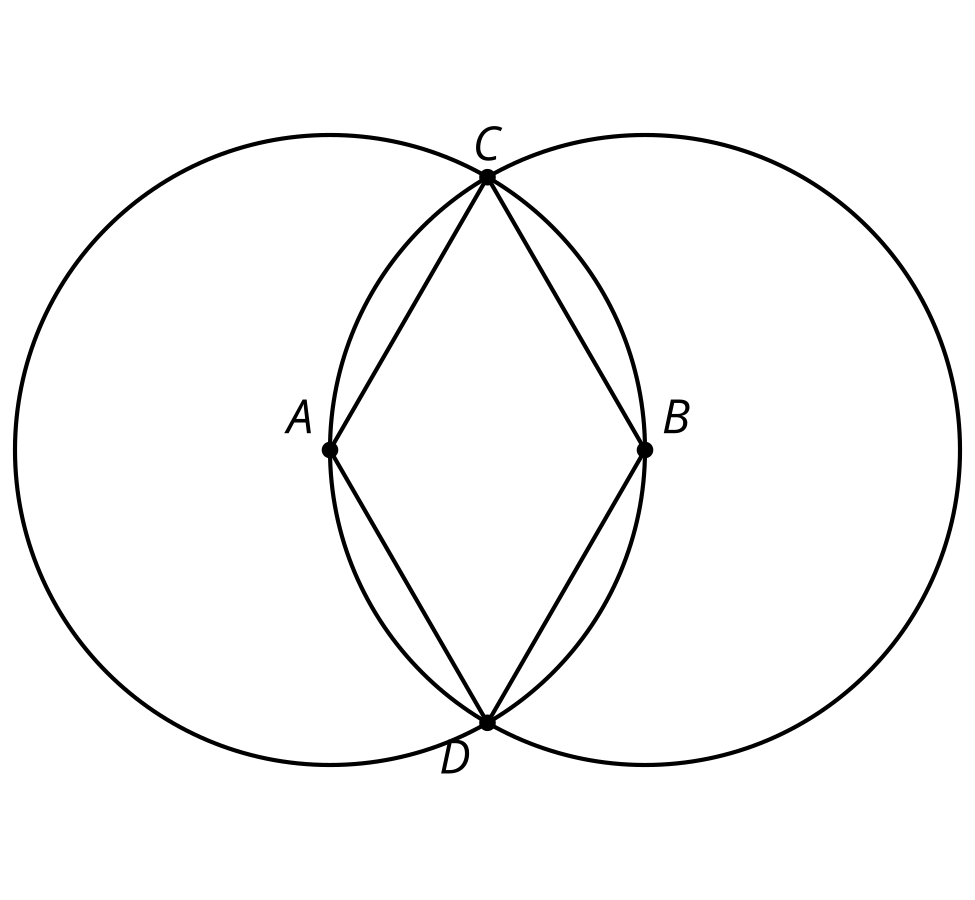
1. This diagram is a straightedge and compass construction of a line perpendicular to line passing through point . Explain why it was helpful to construct points  and to be the same distance from .

* 

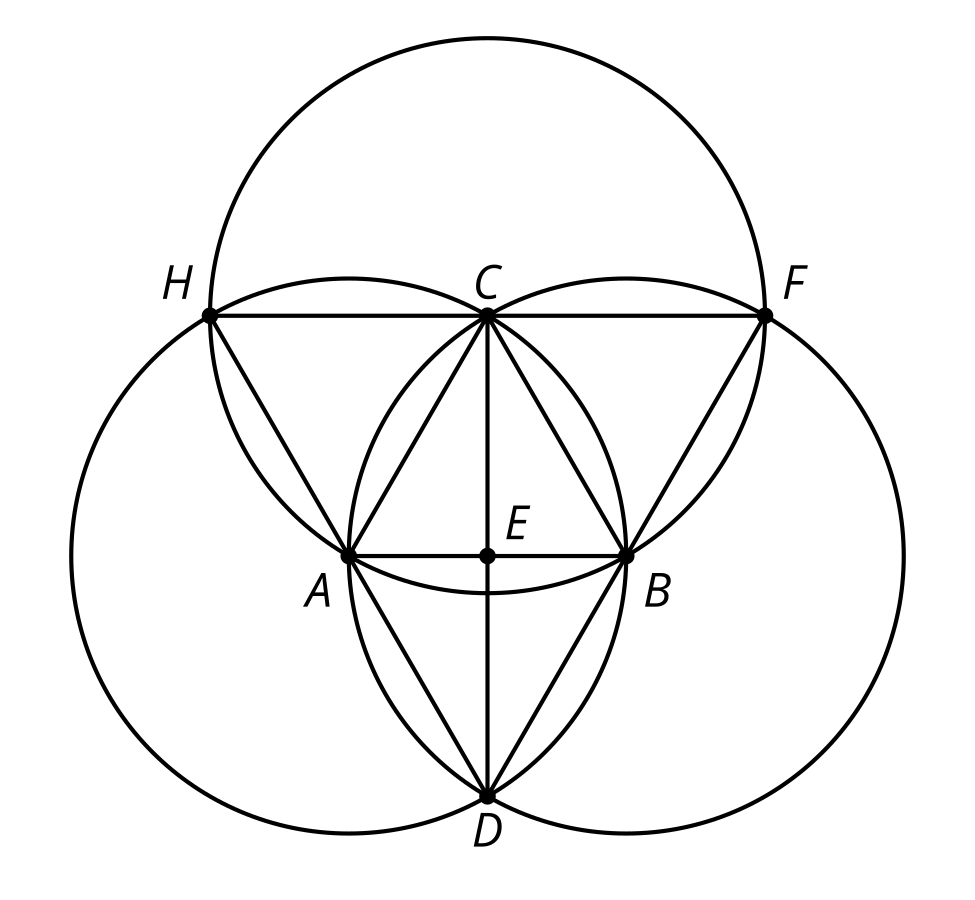
1. This diagram is a straightedge and compass construction.

* Select **all** true statements.
* 
  1. Line is the bisector of angle .
  2. Line is the perpendicular bisector of segment .
  3. Line is the perpendicular bisector of segment .
  4. Line is the perpendicular bisector of segment .
  5. Line is parallel to line .

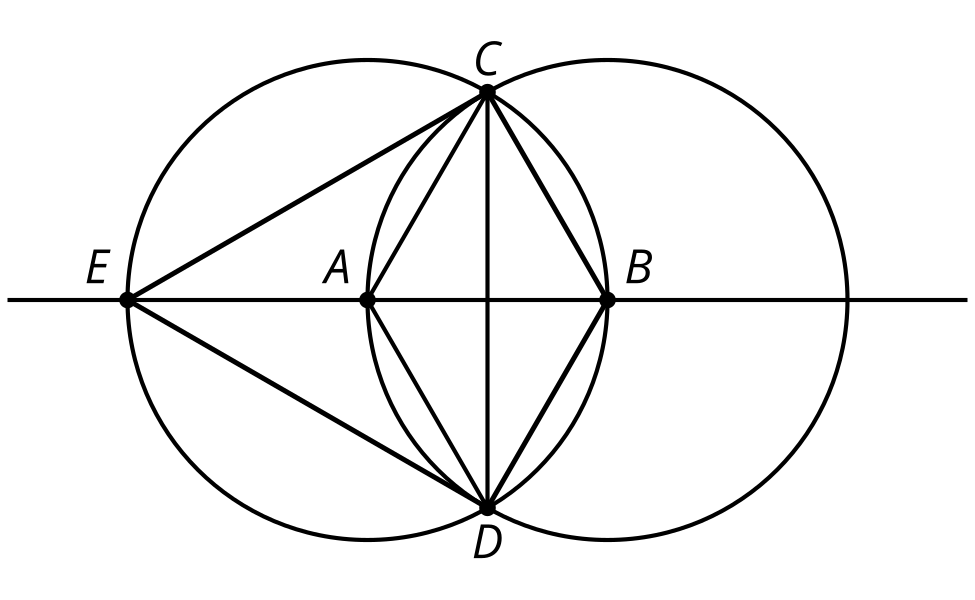
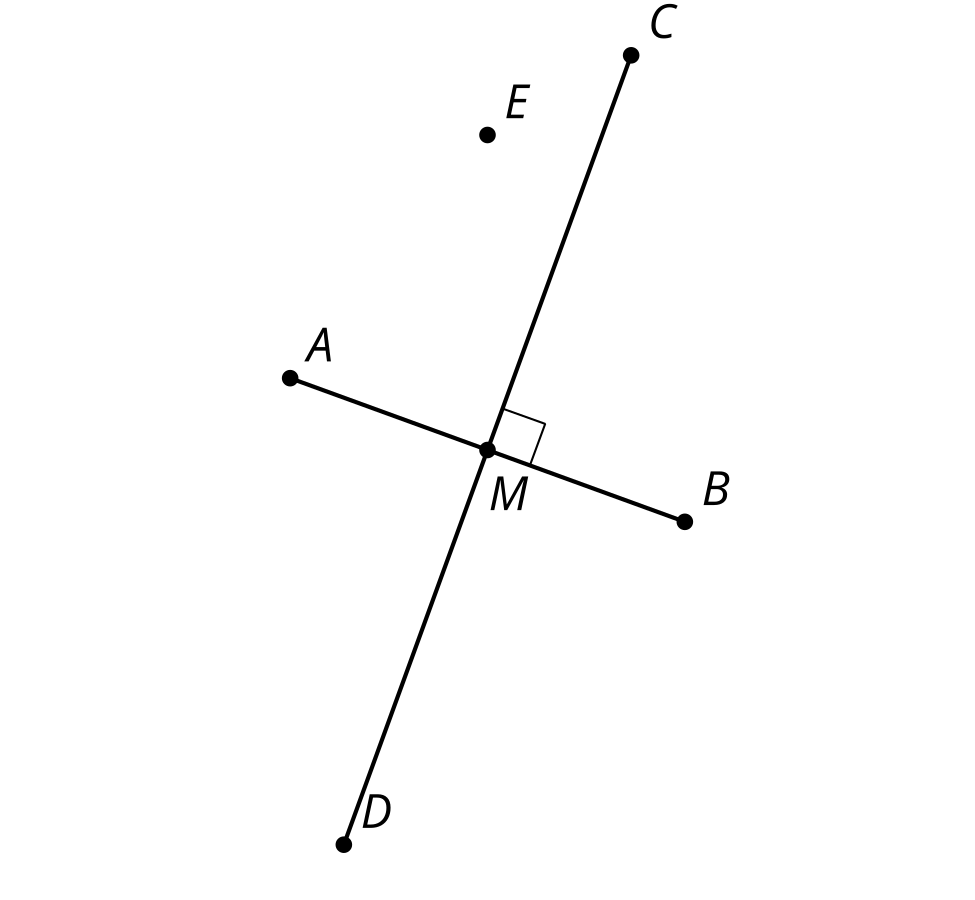
1. This diagram is a straightedge and compass construction. is the center of one circle, and is the center of the other. A *rhombus* is a quadrilateral with 4 congruent sides. Explain why quadrilateral  is a rhombus.

* 
* (From Unit 1, Lesson 4.)

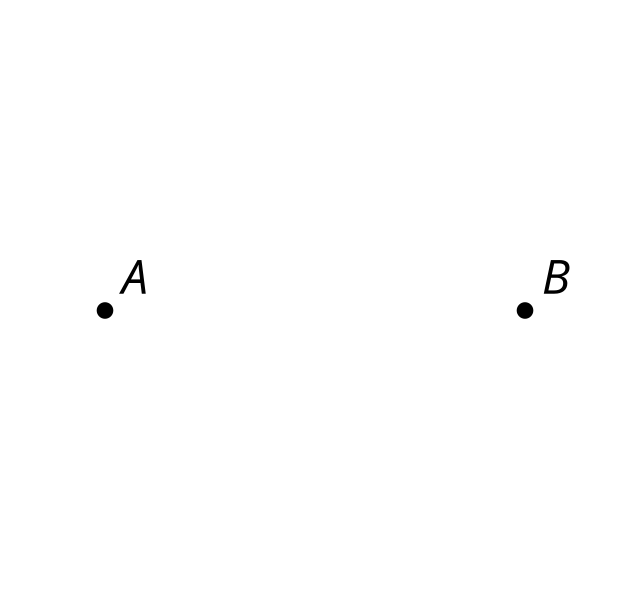
1. , , and are the centers of the three circles. Which line segment is congruent to ?

* 
* (From Unit 1, Lesson 4.)

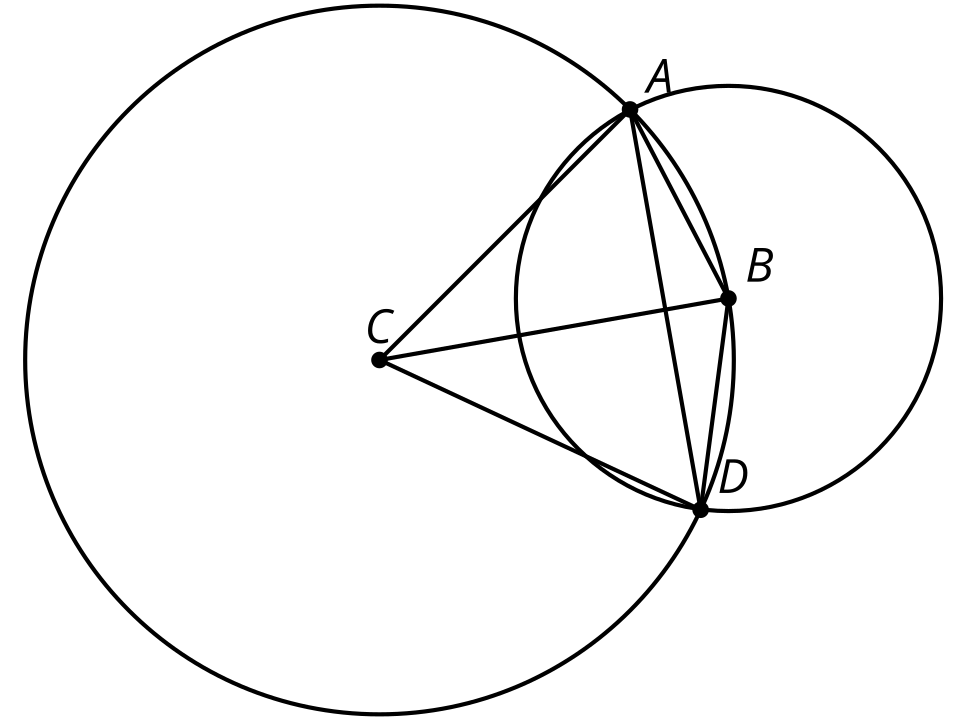
1. In the construction, is the center of one circle, and is the center of the other. Explain why segment is the same length as segment .

* 
* (From Unit 1, Lesson 2.)
* 
* In this diagram, line segment  is the perpendicular bisector of line segment . Assume the conjecture that the set of points equidistant from and is the perpendicular bisector of is true. Is point closer to point , closer to point , or the same distance from both points? Explain how you know.
* (From Unit 1, Lesson 3.)

1. A sheet of paper with points and is folded so that and match up with each other.

* 
* Explain why the crease in the sheet of paper is the perpendicular bisector of segment . (Assume the conjecture that the set of points equidistant from and is the perpendicular bisector of segment  is true.)
* (From Unit 1, Lesson 3.)

1. Here is a diagram of a straightedge and compass construction.  is the center of one circle, and  is the center of the other. Explain why the length of segment is the same as the length of segment .

* 
* (From Unit 1, Lesson 1.)



© CC BY 2019 by Illustrative Mathematics®