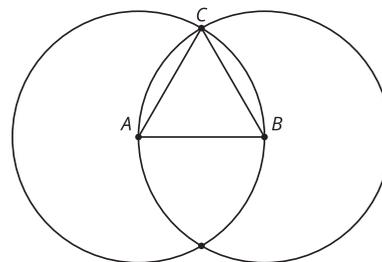
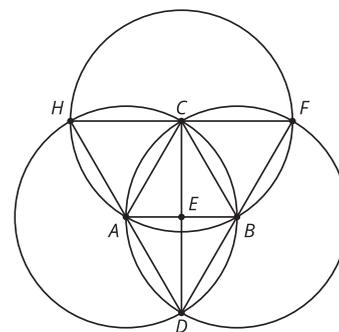


Lesson 4 Practice Problems

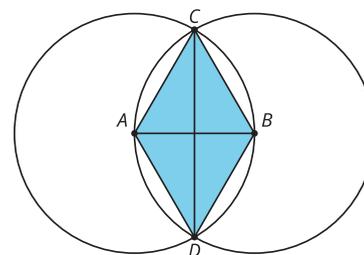
1. This diagram is a straightedge and compass construction. A is the center of one circle, and B is the center of the other. Explain how we know triangle ABC is equilateral.



2. A , B , and C are the centers of the 3 circles. How many equilateral triangles are there in this diagram?

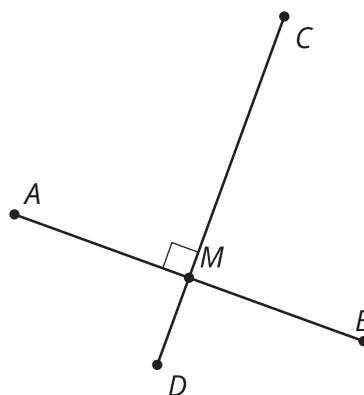


3. This diagram is a straightedge and compass construction. A is the center of one circle, and B is the center of the other. Select **all** the true statements.



- A. $AC = BC$
- B. $AC = BD$
- C. $CD = AB$
- D. $ABCD$ is a square.
- E. ABD is an equilateral triangle.
- F. $CD = AB + AB$

4. Line segment CD is the perpendicular bisector of line segment AB . Is line segment AB the perpendicular bisector of line segment CD ?



(From Unit 1, Lesson 3.)

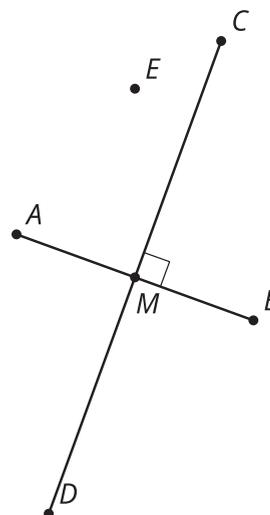
5. Here are 2 points in the plane.



- Using only a straightedge, can you find points in the plane that are the same distance from points A and B ? Explain your reasoning.
- Using only a compass, can you find points in the plane that are the same distance from points A and B ? Explain your reasoning.

(From Unit 1, Lesson 3.)

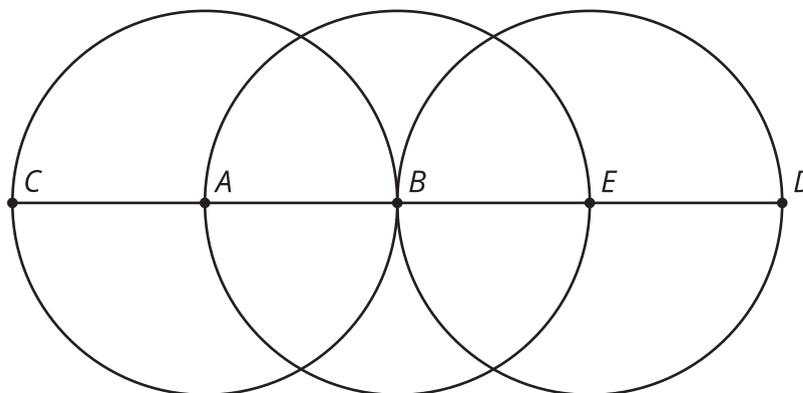
6. In this diagram, line segment CD is the perpendicular bisector of line segment AB . Assume the conjecture that the set of points equidistant from A and B is the perpendicular bisector of AB is true. Select **all** statements that must be true.



- A. $AM = BM$
- B. $CM = DM$
- C. $EA = EM$
- D. $EA < EB$
- E. $AM < AB$
- F. $AM > BM$

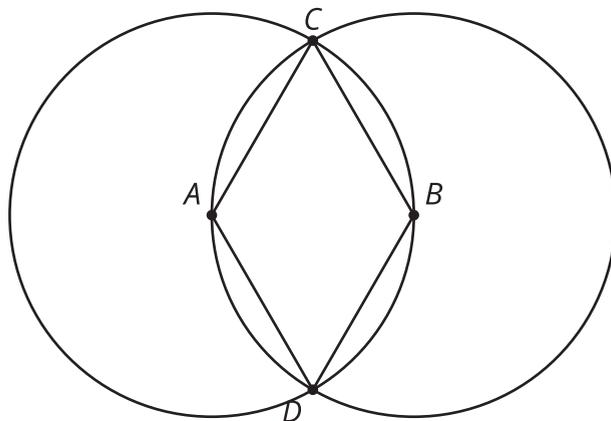
(From Unit 1, Lesson 3.)

7. The diagram was constructed with straightedge and compass tools. Name **all** segments that have the same length as segment AC .



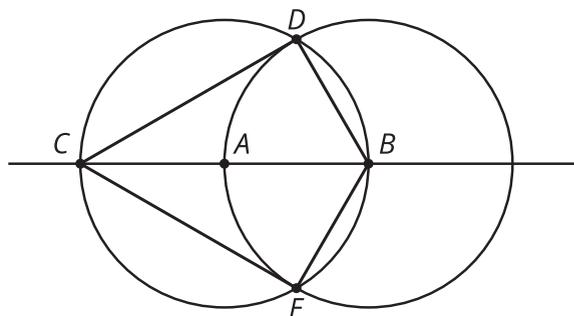
(From Unit 1, Lesson 1.)

8. Starting with 2 marked points, A and B , precisely describe the straightedge and compass moves required to construct the quadrilateral $ACBD$ in this diagram.



(From Unit 1, Lesson 2.)

9. In the construction, A is the center of one circle and B is the center of the other. Which segment has the same length as AB ?



- A. CB
- B. CD
- C. CE
- D. CA

(From Unit 1, Lesson 2.)