### Lesson 3 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. Select **all** the true statements.
* 
	1. Line $CD$ is perpendicular to segment $AB$
	2. Point $M$ is the midpoint of segment $AB$
	3. The length $AB$ is the equal to the length $CD$.
	4. Segment $AM$ is perpendicular to segment $BM$
	5. $CB+BD>CD$
1. 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. Is point $E$ closer to point $A$, closer to point $B$, or the same distance between the points? Explain how you know.
* $AB⊥CD$
* 
*
1. Starting with 2 marked points, $A$ and $B$, precisely describe the straightedge and compass moves required to construct the triangle $ABC$ in this diagram.
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* (From Unit 1, Lesson 2.)
1. This diagram was created by starting with points $C$ and $D$ and using only straightedge and compass to construct the rest. All steps of the construction are visible. Select **all** the steps needed to produce this diagram.
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	1. Construct a circle centered at $A$.
	2. Construct a circle centered at $C$.
	3. Construct a circle centered at $D$.
	4. Label the intersection points of the circles $A$ and $B$.
	5. Draw the line through points $C$ and $D$.
	6. Draw the line through points $A$ and $B$.
* (From Unit 1, Lesson 2.)
1. This diagram was constructed with straightedge and compass tools. $A$ is the center of one circle, and $C$ is the center of the other. Select **all** true statements.
* 
	1. $AB=BC$
	2. $AB=BD$
	3. $AD=2AC$
	4. $BC=CD$
	5. $BD=CD$
* (From Unit 1, Lesson 1.)



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