### Lesson 5 Practice Problems

1. This diagram is a straightedge and compass construction of a line perpendicular to line $AB$ passing through point $C$. Explain why it was helpful to construct points $D$ and $A$ to be the same distance from $C$.
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1. This diagram is a straightedge and compass construction.
* Select **all** true statements.
* 
	1. Line $EF$ is the bisector of angle $BAC$.
	2. Line $EF$ is the perpendicular bisector of segment $BA$.
	3. Line $EF$ is the perpendicular bisector of segment $AC$.
	4. Line $EF$ is the perpendicular bisector of segment $BD$.
	5. Line $EF$ is parallel to line $CD$.
1. This diagram is a straightedge and compass construction. $A$ is the center of one circle, and $B$ is the center of the other. A *rhombus* is a quadrilateral with 4 congruent sides. Explain why quadrilateral $ACBD$ is a rhombus.
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* (From Unit 1, Lesson 4.)
1. $A$, $B$, and $C$ are the centers of the three circles. Which line segment is congruent to $HF$?
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	1. $AB$
	2. $CD$
	3. $DF$
	4. $CB$
* (From Unit 1, Lesson 4.)
1. In the construction, $A$ is the center of one circle, and $B$ is the center of the other. Explain why segment $EA$ is the same length as segment $BC$.
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* (From Unit 1, Lesson 2.)
* $AB⊥CD$
* 
* 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 $M$ closer to point $A$, closer to point $B$, or the same distance from both points? Explain how you know.
* (From Unit 1, Lesson 3.)
1. A sheet of paper with points $A$ and $B$ is folded so that $A$ and $B$ match up with each other.
* 
* Explain why the crease in the sheet of paper is the perpendicular bisector of segment $AB$. (Assume the conjecture that the set of points equidistant from $A$ and $B$ is the perpendicular bisector of segment $AB$ is true.)
* (From Unit 1, Lesson 3.)
1. Here is a diagram of a straightedge and compass construction. $C$ is the center of one circle, and $B$ is the center of the other. Explain why the length of segment $CB$ is the same as the length of segment $CD$.
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* (From Unit 1, Lesson 1.)



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