### Lesson 7 Practice Problems

1. What triangle congruence theorem could you use to prove triangle $ADE$ is congruent to triangle $CBE$?
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1. Han wrote a proof that triangle $BCD$ is congruent to triangle $DAB$. Han's proof is incomplete. How can Han fix his proof?
* $DC∥AB$
* 
	+ Line $AB$ is parallel to line $DC$ and cut by transversal $DB$. So angles $CDB$ and $ABD$ are alternate interior angles and must be congruent.
	+ Side $DB$ is congruent to side $BD$ because they're the same segment.
	+ Angle $A$ is congruent to angle $C$ because they're both right angles.
	+ By the Angle-Side-Angle Triangle Congruence Theorem, triangle $BCD$ is congruent to triangle $DAB$.
1. Segment $GE$ is an angle bisector of both angle $HEF$ and angle $FGH$. Prove triangle $HGE$ is congruent to triangle $FGE$.
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1. Triangles $ACD$ and $BCD$ are isosceles. Angle $BAC$ has a measure of 33 degrees and angle $BDC$ has a measure of 35 degrees. Find the measure of angle $ABD$.
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* (From Unit 2, Lesson 6.)
1. Which conjecture is possible to prove?
	1. All triangles with at least one side length of 5 are congruent.
	2. All pentagons with at least one side length of 5 are congruent.
	3. All rectangles with at least one side length of 5 are congruent.
	4. All squares with at least one side length of 5 are congruent.
* (From Unit 2, Lesson 5.)
1. Andre is drawing a triangle that is congruent to this one. He begins by constructing an angle congruent to angle $LKJ$. What is the least amount of additional information that Andre needs to construct a triangle congruent to this one?
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* (From Unit 2, Lesson 4.)
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. Which segment has the same length as segment $CA$?
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* 
* 1. $BA$
	2. $BD$
	3. $CB$
	4. $AD$
* (From Unit 1, Lesson 1.)



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