### Lesson 11 Practice Problems

1. Segment $A^{′}B^{′}$ is parallel to segment $AB$.
	1. What is the length of segment $AB$?
	2. What is the length of segment $B^{′}B$?
* 
1. Explain how you know that segment $DE$ is *not* parallel to segment $BC$.
* 
1. In right triangle $ABC$, $AC=4$ and $BC=5$. A new triangle $DEC$ is formed by connecting the midpoints of $AC$ and $BC$.
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	1. What is the area of triangle $ABC$?
	2. What is the area of triangle $DEC$?
	3. Does the scale factor for the side lengths apply to the area as well?
1. Which of these statements is true?
	1. To know whether 2 triangles are similar, it is enough to know the measure of 1 angle.
	2. To know whether 2 triangles are similar, it is enough to know the length of 1 side.
	3. To know whether 2 triangles are similar, it is enough to know the measure of 2 angles in each triangle.
	4. To know whether 2 triangles are similar, it is enough to know the measure of 2 sides in each triangle.
* (From Unit 3, Lesson 10.)
	1. Are triangles $ABC$ and $DEF$ similar? Show or explain your reasoning.
	2. If possible, find the length of $EF$. If not, explain why the length of $EF$ cannot be determined.
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* (From Unit 3, Lesson 10.)
1. What is the length of segment $DF$?
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* (From Unit 3, Lesson 9.)
1. The triangle $ABC$ is taken to triangle $A^{′}B^{′}C^{′}$ by a dilation. Select **all** of the scale factors for the dilation that would result in an image that was *smaller* than the original figure.
	1. $\frac{1}{2}$
	2. $\frac{8}{9}$
	3. 1
	4. $\frac{3}{2}$
	5. 2
* (From Unit 3, Lesson 3.)



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