### Lesson 4 Practice Problems

1. Angle $ABC$ is taken by a dilation with center $P$ and scale factor 3 to angle $A^{′}B^{′}C^{′}$. The measure of angle $ABC$ is $21^{∘}$. What is the measure of angle $A^{′}B^{′}C^{′}$?
2. Select **all** lines that could be the image of line $m$ by a dilation.
* 
	1. $ℓ$
	2. $m$
	3. $n$
	4. $o$
	5. $p$
1. Dilate line $f$ with a scale factor of 2. The image is line $g$. Which labeled point could be the center of this dilation?
* 
	1. $A$
	2. $B$
	3. $C$
	4. $D$
1. Quadrilateral $A^{′}B^{′}C^{′}E^{′}$ is the image of quadrilateral $ABCE$ after a dilation centered at $F$. What is the scale factor of this dilation?
* 
* (From Unit 3, Lesson 3.)
1. A polygon has a perimeter of 18 units. It is dilated with a scale factor of $\frac{3}{2}$. What is the perimeter of its image?
	1. 12 units
	2. 24 units
	3. 27 units
	4. 30 units
* (From Unit 3, Lesson 3.)
1. Solve the equation.
* $\frac{4}{7}=\frac{10}{x}$
* (From Unit 3, Lesson 1.)
1. Here are some measurements for triangle $ABC$ and triangle $XYZ$:
	* Angle $CAB$ and angle $ZXY$ are both 30 degrees
	* $AC$ and $XZ$ both measure 3 units
	* $CB$ and $ZY$ both measure 2 units
* Andre thinks thinks these triangles must be congruent. Clare says she knows they might not be congruent. Construct 2 triangles with the given measurements that aren't congruent. Explain why triangles with 3 congruent parts aren't necessarily congruent.
* (From Unit 2, Lesson 11.)



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