### Lesson 3 Practice Problems

1. Pentagon $A^{′}B^{′}C^{′}D^{′}E^{′}$ is the image of pentagon $ABCDE$ after a dilation centered at $F$. What is the scale factor of this dilation?
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1. A polygon has perimeter 12 units. It is dilated with a scale factor of $\frac{3}{4}$. What is the perimeter of its image?
	1. 9 units
	2. 12 units
	3. 16 units
	4. It cannot be determined.
2. Triangle $ABC$ is taken to triangle $A^{′}B^{′}C^{′}$ by a dilation. Which of these scale factors for the dilation would result in an image that was *larger* than the original figure?
	1. $\frac{3}{5}$
	2. $\frac{13}{17}$
	3. 1
	4. $\frac{4}{3}$
3. Dilate quadrilateral $ABCD$ using center $D$ and scale factor 2.
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* (From Unit 3, Lesson 2.)
1. Dilate Figure $G$ using center $B$ and scale factor 3.
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* (From Unit 3, Lesson 2.)
1. Polygon Q is a scaled copy of Polygon P.
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* The value of $x$ is 6, what is the scale factor?
	1. $\frac{3}{4}$
	2. $\frac{4}{3}$
	3. 3
	4. 4
* (From Unit 3, Lesson 1.)
1. Prove that segment $AD$ is congruent to segment $BC$.
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* (From Unit 2, Lesson 10.)



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