### Lesson 7 Practice Problems

1. Sketch a figure that is similar to this figure. Label side and angle measures.
* 
1. Write 2 different sequences of transformations that would show that triangles $ABC$ and $AED$ are similar. The length of $AC$ is 6 units.
* $AC=6$
* 
1. What is the definition of similarity?
* (From Unit 3, Lesson 6.)
1. Select **all** figures which are similar to Parallelogram $P$.
* Parallelogram $P$
* 
* Figure $A$
* 
* Figure $B$
* 
* Figure $C$
* 
* Figure $D$
* 
* Figure $E$
* 
	1. Figure $A$
	2. Figure $B$
	3. Figure $C$
	4. Figure $D$
	5. Figure $E$
1. Find a sequence of rigid transformations and dilations that takes square $ABCD$ to square $EFGH$.
* 
	1. Translate by the directed line segment $AE$, which will take $B$ to a point $B^{′}$. Then rotate with center $E$ by angle $B^{′}EF$. Finally, dilate with center $E$ by scale factor $\frac{5}{2}$.
	2. Translate by the directed line segment $AE$, which will take $B$ to a point $B^{′}$. Then rotate with center $E$ by angle $B^{′}EF$. Finally, dilate with center $E$ by scale factor $\frac{2}{5}$.
	3. Dilate using center $E$ by scale factor $\frac{2}{5}$.
	4. Dilate using center $E$ by scale factor $\frac{5}{2}$.
* (From Unit 3, Lesson 6.)
1. Triangle $DEF$ is formed by connecting the midpoints of the sides of triangle $ABC$. What is the perimeter of triangle $ABC$?
* 
* (From Unit 3, Lesson 5.)
1. Select the quadrilateral for which the diagonal is a line of symmetry.
	1. parallelogram
	2. square
	3. trapezoid
	4. isosceles trapezoid
* (From Unit 2, Lesson 14.)
1. Triangles $FAD$ and $DCE$ are each translations of triangle $ABC$
* 
* Explain why angle $CAD$ has the same measure as angle $ACB$.
* (From Unit 1, Lesson 21.)



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