### Lesson 12 Practice Problems

1. Match the directed line segment with the image of Polygon $P$ being transformed to Polygon $Q$ by translation by that directed line segment.
* Translation 1
* 
* Translation 2
* 
* Translation 3
* 
* Translation 4
* 
	1. 
	2. 
	3. 
	4. 
	5. Translation 1
	6. Translation 2
	7. Translation 3
	8. Translation 4
1. Draw the image of quadrilateral $ABCD$ when translated by the directed line segment $v$. Label the image of $A$ as $A^{′}$, the image of $B$ as $B^{′}$, the image of $C$ as $C^{′}$ and the image of $D$ as $D^{′}$.
* 
1. Which statement is true about a translation?
	1. A translation takes a line to a parallel line or itself.
	2. A translation takes a line to a perpendicular line.
	3. A translation requires a center of translation.
	4. A translation requires a line of translation.
2. Select **all** the points that stay in the same location after being reflected across line $ℓ$.
* 
	1. A
	2. B
	3. C
	4. D
	5. E
* (From Unit 1, Lesson 11.)
1. Lines $ℓ$ and $m$ are perpendicular. A point $Q$ has this property: rotating $Q$ 180 degrees using center $P$ has the same effect as reflecting $Q$ over line $m$.
* $m⊥ℓ$
* 
	1. Give two possible locations of $Q$.
	2. Do all points in the plane have this property?
* (From Unit 1, Lesson 11.)
1. There is a sequence of rigid transformations that takes $A$ to $A^{′}$, $B$ to $B^{′}$, and $C$ to $C^{′}$. The same sequence takes $D$ to $D^{′}$. Draw and label $D^{′}$:
* 
* (From Unit 1, Lesson 10.)
1. Two distinct lines, $ℓ$ and $m$, are each perpendicular to the same line $n$.
	1. What is the measure of the angle where line $ℓ$ meets line $n$?
	2. What is the measure of the angle where line $m$ meets line $n$?
* (From Unit 1, Lesson 6.)



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