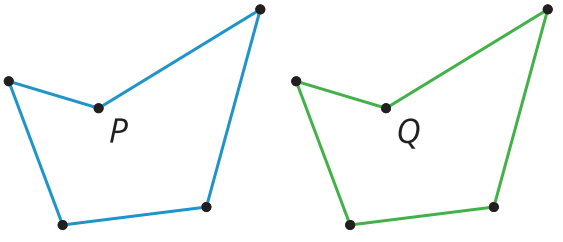
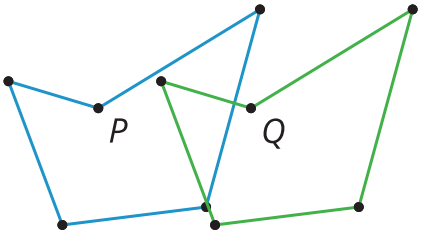
Lesson 12 Practice Problems

1. Match the directed line segment with the image of Polygon P being transformed to Polygon Q by translation by that directed line segment.

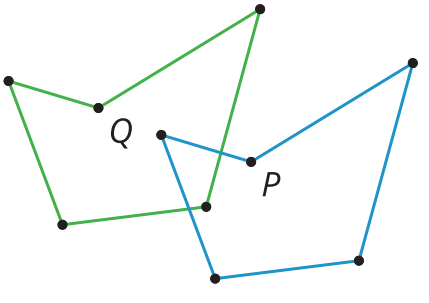
Translation 1



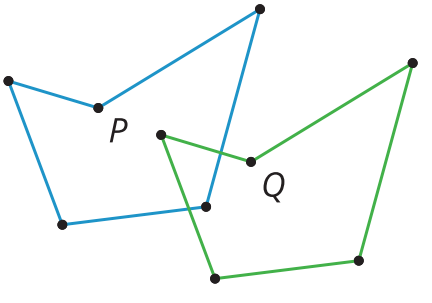
Translation 2

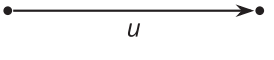


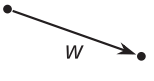
Translation 3

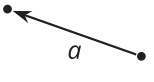


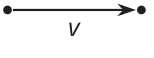
Translation 4



A. 

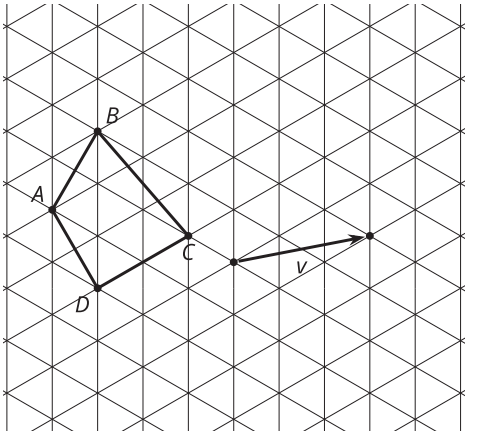
B. 

C. 

D. 

1. Translation 1
2. Translation 2
3. Translation 3
4. Translation 4

2. 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'.



3. Which statement is true about a translation?

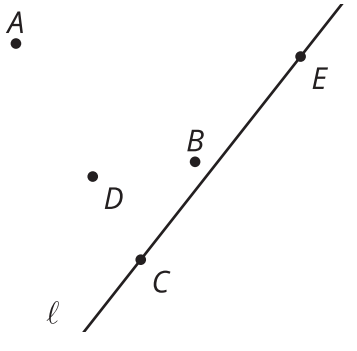
A. A translation takes a line to a parallel line or itself.

B. A translation takes a line to a perpendicular line.

C. A translation requires a center of translation.

D. A translation requires a line of translation.

4. Select **all** the points that stay in the same location after being reflected across line ℓ.



A. A

B. B

C. C

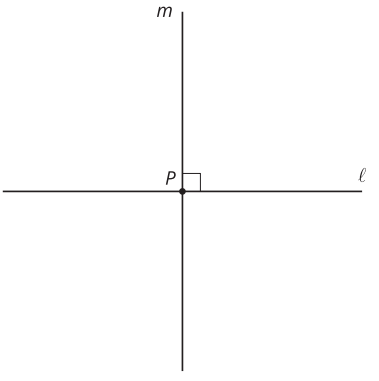
D. D

E. E

(From Unit 1, Lesson 11.)

5. 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.

$m \perp \ell$

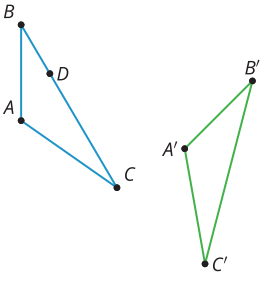


a. Give two possible locations of Q.

b. Do all points in the plane have this property?

(From Unit 1, Lesson 11.)

6. 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.)

7. Two distinct lines, ℓ and m, are each perpendicular to the same line n.

a. What is the measure of the angle where line ℓ meets line n?

b. What is the measure of the angle where line m meets line n?

(From Unit 1, Lesson 6.)