

Name: \_\_\_\_\_

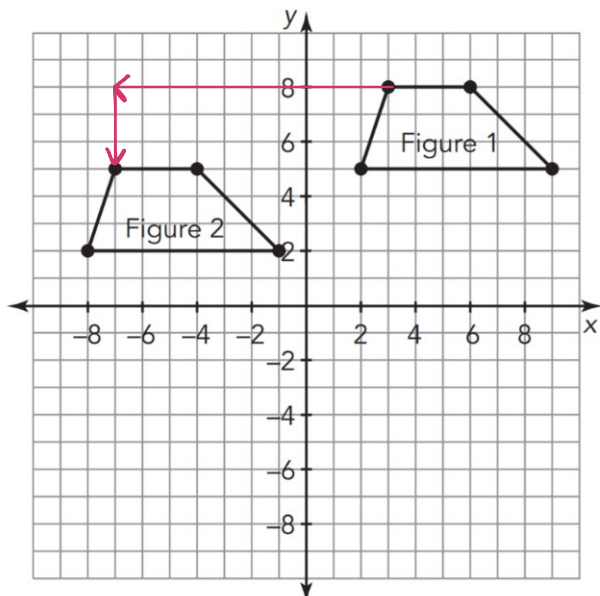
*Key*

Date: \_\_\_\_\_

Period: A B C D E F

### Module 1: Topic 1 Lesson 3 Assignment

1. A **TRANSLATION** is a transformation which slides each point of a figure the same distance and the same direction.
2. Anytime a translation is performed, the pre-image and image **will always** be congruent.



Use the graph on the left to answer following questions.

3a. Describe the sequence of translations used to move Figure 1 onto Figure 2.

*Translate left 10 and down 3*

b. Write the rule for the translation.

$(x, y) \rightarrow (x - 10, y - 3)$

4. Use the coordinates of the pre-image to determine how the trapezoid was translated to get the resulting image.

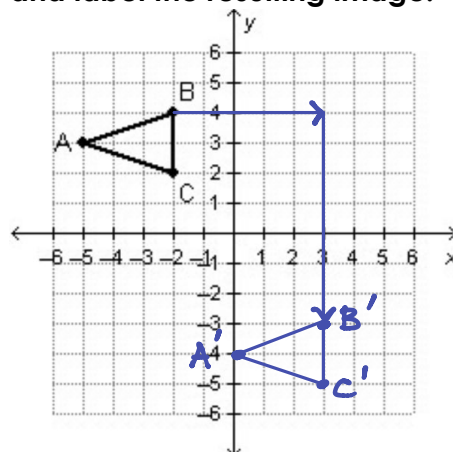
A (2,5)	A' (3,-3)
B (3,8)	B' (4, 0)
C (6, 8)	C' (7, 0)
D (9, 5)	D' (10, -3)

*Translate right 1, down 8*

$(x, y) \rightarrow (x + 1, y - 8)$

5. Translate Triangle ABC **right 5 units** and **down 7 units**.

Draw and label the resulting image.



6. Triangle XYZ is graphed on a coordinate plane and has vertices of (-3, -6) (0, 0) and (4, 5). If triangle XYZ is translated **4 units to the right** and **7 units down**, what will the coordinates of the image be?

$X' (1, -13)$   $Y' (4, -7)$   $Z' (8, -2)$   $(x, y) \rightarrow (x + 4, y - 7)$