



# Translations Lesson 7: Self-Assessment

Name \_\_\_\_\_

## Student Activity



Class \_\_\_\_\_

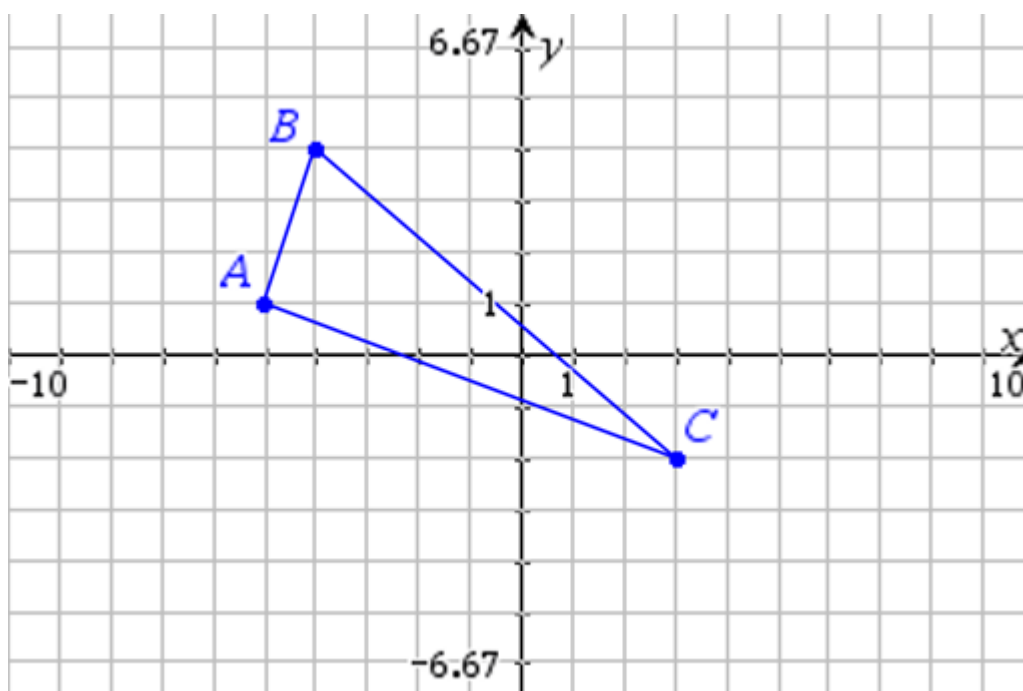
In this lesson, you will be given the opportunity to summarize, review, explore and extend ideas about Translations.

**It is important that one of the Translations Tours be done before any Translations lessons.**



**1 – 4. Make a sketch of each on the grid supplied.**

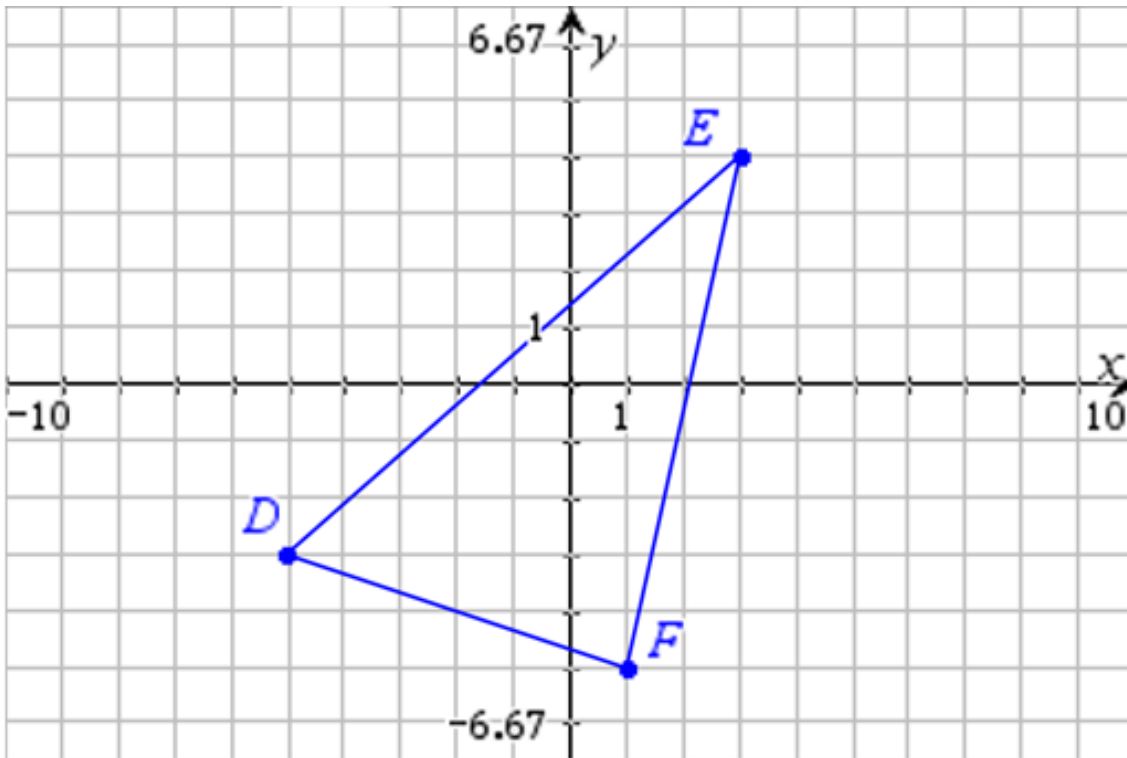
1. Translate  $\triangle ABC$  down 4 units. Then fill in the blanks with appropriate responses.



- If  $m\angle C = 35^\circ$ , then  $m\angle$  \_\_\_\_\_ = \_\_\_\_\_ $^\circ$
- If  $BC = 8$  cm, then \_\_\_\_\_ = \_\_\_\_\_ cm.
- If the slope of  $\overline{BC} = -\frac{6}{7}$ , then the slope of \_\_\_\_\_ = \_\_\_\_\_.
- If the perimeter of  $\triangle ABC = 17$  in, then the perimeter of \_\_\_\_\_ = \_\_\_\_\_
- If the coordinates of a point G on  $\triangle ABC$  are  $(x, y)$ , then the coordinates of G' are \_\_\_\_\_



2. Translate  $\triangle DEF$  5 units to the right. Then fill in the blanks with appropriate responses.

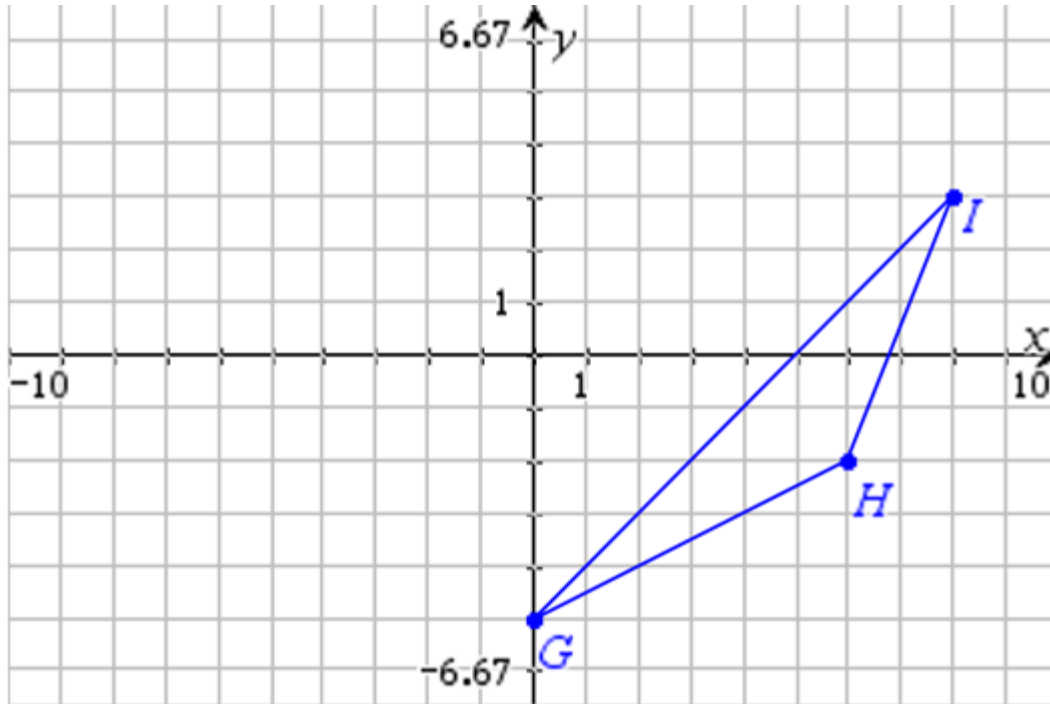


- a. If  $m\angle F = 70^\circ$ , then  $m\angle$  \_\_\_\_\_  $=$  \_\_\_\_\_ $^\circ$
- b. if the slope of  $\overline{DE} = \frac{7}{8}$ , then the slope of \_\_\_\_\_  $=$  \_\_\_\_\_
- c. If the coordinates of E are (3, 4), then the coordinates of \_\_\_\_\_ are \_\_\_\_\_
- d. If the area of  $\triangle DEF$  is 24 sq cm, then the area of \_\_\_\_\_ is \_\_\_\_\_
- e. If the coordinates of a point H on  $\triangle DEF$  are (x, y), then the coordinates of H' are \_\_\_\_\_
- f. Name two segments that are parallel to  $\overline{DD'}$  and state their slopes.

\_\_\_\_\_



3. Translate  $\triangle GHI$  up 3 units and to the left 6 units. Then fill in the blanks with appropriate responses.



- a. If  $GH = 9$  in, then \_\_\_\_\_ = \_\_\_\_\_ in
- b. If the perimeter of  $\triangle GHI$  is 36 cm, then the perimeter of \_\_\_\_\_ is \_\_\_\_\_.
- c. If the slope of  $\overline{HI} = \frac{5}{2}$ , then the slope of \_\_\_\_\_ = \_\_\_\_\_
- d. If the coordinates of H are  $(6, -2)$ , then the coordinates of \_\_\_\_\_ are \_\_\_\_\_
- e. If the coordinates of a point P on  $\triangle GHI$  are  $(x, y)$ , then the coordinates of P' are \_\_\_\_\_
- f. Name three sets of parallel segments and list the slope of each:

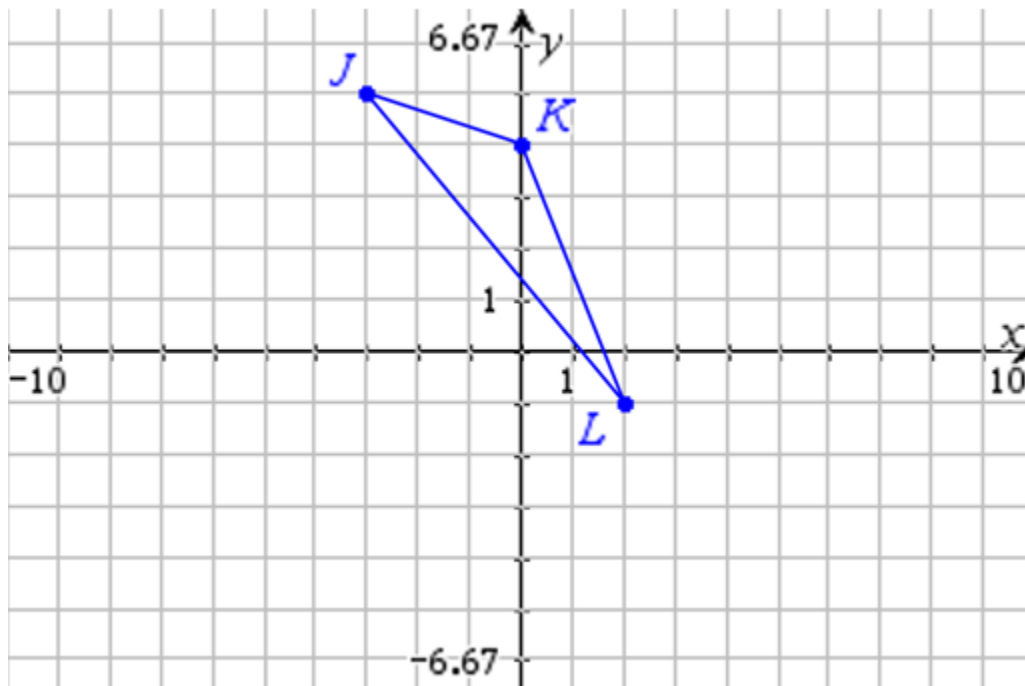
\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_



4. Translate  $\triangle JKL$  to the right 4 units and down 2 units. Then fill in the blanks with appropriate responses.

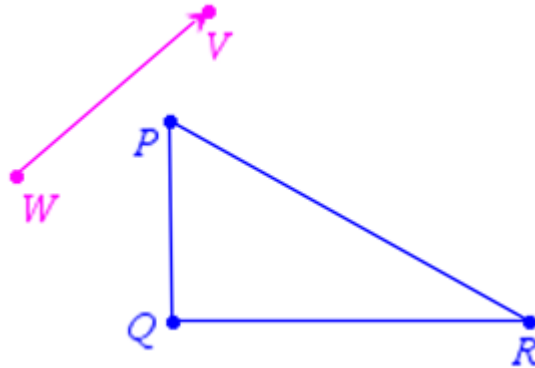


- If  $m\angle K = 125^\circ$ , then the  $m\angle$  \_\_\_\_\_ = \_\_\_\_\_<sup>o</sup>
- If  $JL = 24$  in, then \_\_\_\_\_ = \_\_\_\_\_ in
- If the area of  $\triangle JKL = 40 \text{ sq in}$ , then the area of \_\_\_\_\_ = \_\_\_\_\_
- If the slope of  $\overline{JK} = -\frac{1}{3}$ , then the slope of \_\_\_\_\_ = \_\_\_\_\_
- If the coordinates of L are  $(2, -1)$ , then the coordinates of \_\_\_\_\_ are \_\_\_\_\_
- If the coordinates of a point Q on  $\triangle JKL$  are  $(x, y)$ , then the coordinates of Q' are \_\_\_\_\_
- Name three sets of parallel segments and list the slope of each:
   
\_\_\_\_\_ slope is \_\_\_\_\_
   
\_\_\_\_\_ slope is \_\_\_\_\_
   
\_\_\_\_\_ slope is \_\_\_\_\_

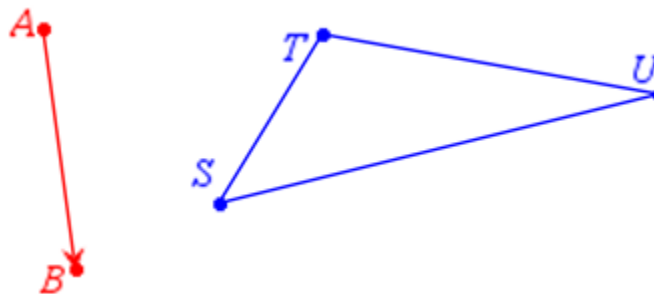


5 – 8. Make a sketch of each in the space provided.

5. Translate  $\triangle PQR$  about  $\overrightarrow{WV}$ . Use a straightedge.

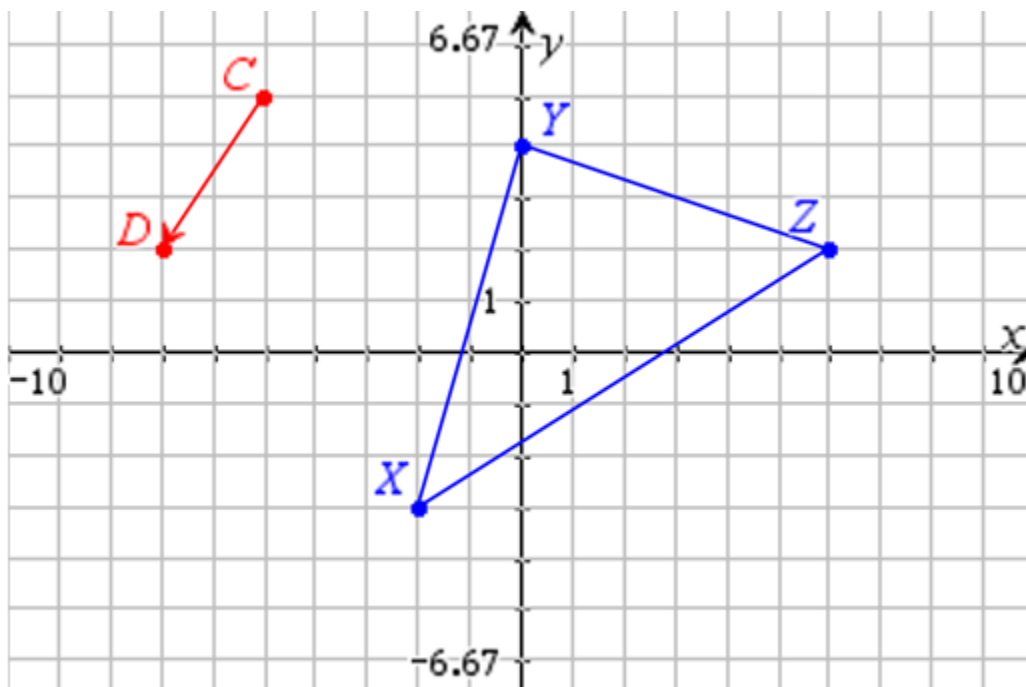


6. Translate  $\triangle STU$  about  $\overrightarrow{AB}$ . Use a straightedge.





7. Translate  $\triangle XYZ$  by vector  $\overrightarrow{CD}$ . Use a straightedge.



a. What segments are parallel to vector  $\overrightarrow{CD}$ ? \_\_\_\_\_

What is the slope of each of those segments? \_\_\_\_\_

b. Name three other pairs of segments that are also parallel and state their slopes:

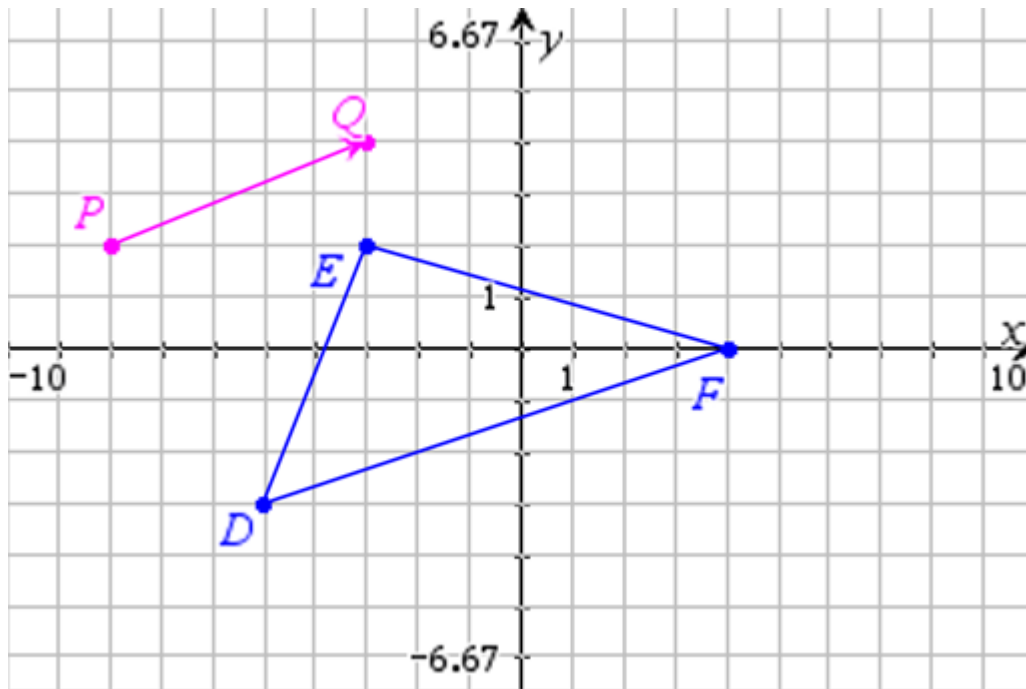
\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_



8. Translate  $\triangle DEF$  by vector  $\overrightarrow{PQ}$ .



a. What segments are parallel to vector  $\overrightarrow{PQ}$ ? \_\_\_\_\_

What is the slope of each of those segments? \_\_\_\_\_

b. Name three other pairs of segments that are also parallel and state their slopes:

\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_

\_\_\_\_\_ slope is \_\_\_\_\_



# Translations Lesson 7: Self-Assessment

Name \_\_\_\_\_

## Student Activity



Class \_\_\_\_\_

9. Given:  $\triangle DEF$  is translated to the left 7 units and up 5 units.

- a. If D has coordinates (5, 7), what are the coordinates for D'? \_\_\_\_\_
- b. If E has coordinate  $(-3, -7)$ , what are the coordinates of E'? \_\_\_\_\_
- c. If F has coordinates (1, 6), what are the coordinates of F? \_\_\_\_\_
- d. If D has coordinates (x, y), what are the coordinates for D'? \_\_\_\_\_
- e. If E has coordinates (p, q), what are the coordinates for E? \_\_\_\_\_

10. Given:  $\triangle PQR$  is translated to the right 8 units and down 3 units.

- a. If P has coordinates (5, 7), what are the coordinates for P'? \_\_\_\_\_
- b. If Q has coordinate  $(-3, -7)$ , what are the coordinates of Q'? \_\_\_\_\_
- c. If R has coordinates (1, 6), what are the coordinates of R? \_\_\_\_\_
- d. If P has coordinates (x, y), what are the coordinates for P'? \_\_\_\_\_
- e. If P has coordinates (a, b), what are the coordinates for P? \_\_\_\_\_

11. Given:  $\triangle XYZ$  is translated down 7 units and to the left 10 units.

- a. If X has coordinates (5, 7), what are the coordinates for X'? \_\_\_\_\_
- b. If Y has coordinate  $(-3, -7)$ , what are the coordinates of Y'? \_\_\_\_\_
- c. If Z has coordinates (1, 6), what are the coordinates of Z? \_\_\_\_\_
- d. If X has coordinates (a, b), what are the coordinates for X'? \_\_\_\_\_
- e. If E has coordinates (c, d), what are the coordinates for E? \_\_\_\_\_