**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**M8-U3: HW #1 – Translations Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.** Draw the translation of the triangle *HOT* six units left and one unit down. Label the image *H’O’T’*. Is the image similar or congruent? How do you know?

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**2.** Find the translation of the quadrilateral *WXYZ* under the rule

.

****

Use the grid below to answer questions 3 through 5.



**3.** Find the rule to describe the translation from point *A* to point *B*.

**4.** Find the rule to describe the translation from point *C* to point *D*.

**5.** Find the rule to describe the translation from point *E* to point *A*.

**6.** Quadrilateral *ABCD* is plotted on the grid below.

***Part A***

On the graph, draw the translation of polygon *ABCD* eight units to the left and seven units down. Label the image *A’B’C’D’*.



***Part B***

On the lines below, explain how you determined the location of *A’*.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** Quadrilateral *PQRS* is plotted on the grid below.

On the graph, draw the translation of polygon *PQRS* three units to the left and four units down. Label the image *P’Q’R’S’*.



Now create polygon *P”Q”R”S”* by translating polygon *P’Q’R’S’* using the rule . What will be the coordinates of point *Q”*?

***Answer \_\_\_\_\_\_\_\_\_\_\_\_\_\_***

On the lines below, write a single translation rule from polygon *PQRS* to polygon *P”Q”R”S”*.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Spiral:**

Solve the equations. If appropriate write *identity* or *no solution.* Show all work

**8.** 

**9.** Denise’s cell phone plan is $29.95 per month plus $0.10 per minute of call time. Denise’s cell phone bill is $99.95. For how many minutes was she billed?