

### Translations with Rules #3

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

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

Period: \_\_\_\_

Convert the following translation rules into words.

1.  $(-6, 7)$

2.  $(5, 10)$

3.  $(8, -1)$

Convert the following directions for translations into ordered pairs to show the rule.

4. 5 units right and 2 units down

5. 7 units up and 4 units left

6. 10 units left and 6 units right

7. 2.5 units down and 1 unit right

Complete the following translations using ordered pairs/math NO graphing. Make sure you show your work to prove you did it correctly.

8. Translate  $\triangle ABC$   $(-8, 5)$

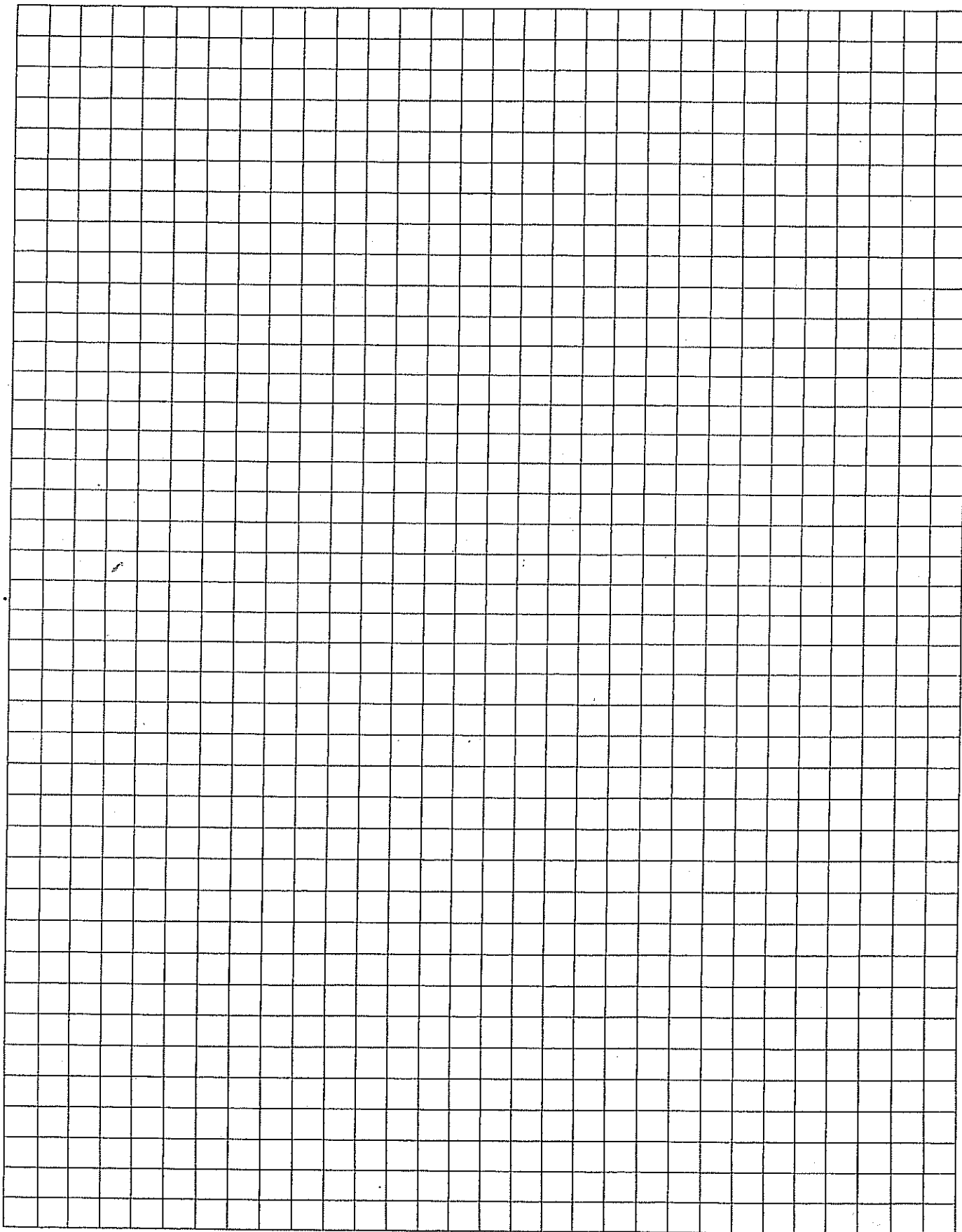
A  $(3, 4)$  B  $(-1, 6)$  C  $(0, -2)$

9. Translate quadrilateral PQRS  $(3, -2)$

P  $(-2, 6)$  Q  $(-5, 8)$  R  $(6, -2)$  S  $(5, -3)$

10. Translate pentagon JKLMN  $(-1, -6)$

J  $(-4, -6)$  K  $(-1, -10)$  L  $(3, -8)$  M  $(2, -5)$  N  $(0, -11)$



## Translations #3 Graph Paper

Complete the following transformations on the graph paper on the backside of Translations #3 worksheet. Hint: You may want to use different colored pen/colored pencil for each triangle so you can keep track of each one a little easier.

Triangle RST is at  $R(3, -1)$ ,  $S(2, -5)$ , and  $T(6, -4)$

Translate  $\triangle RST$   $(-7, 10)$

Rotate  $\triangle R'S'T'$   $90^\circ$  counterclockwise about the origin

Translate  $\triangle RST$  8 units down and 3 units right

Rotate  $\triangle R'S'T'$   $180^\circ$  around point  $R'$

In your own words explain in detail how you can prove that  $\triangle R'S'T'$  and  $\triangle R''S''T''$  are congruent.

In your own words explain in detail how you can prove that  $\triangle RST$  and  $\triangle R'''S'''T'''$  are congruent.