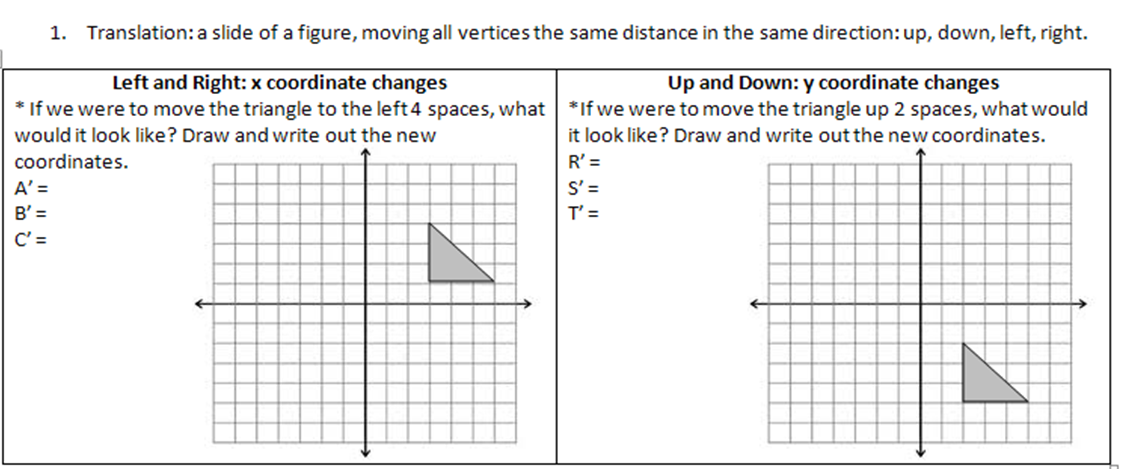
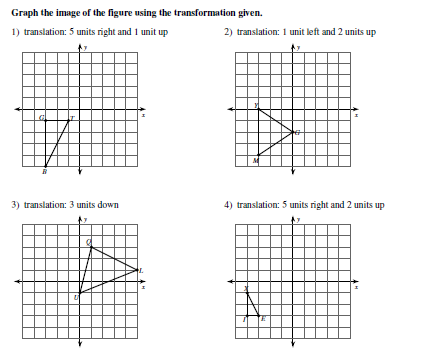
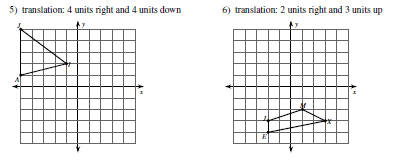
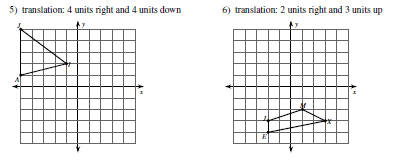
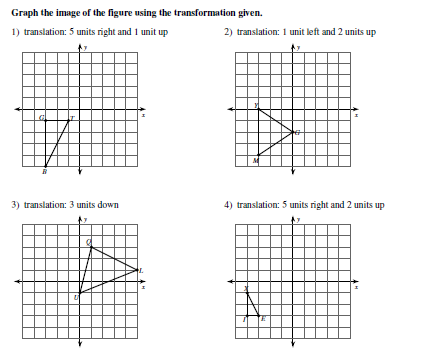
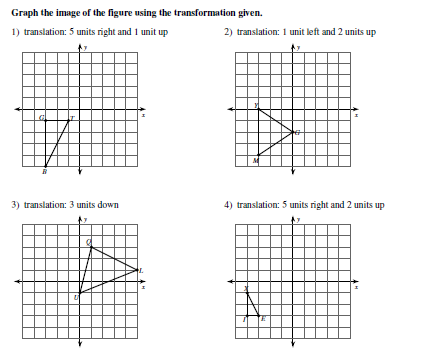
**Unit 4 #2 Translations**



**Example Problems:** Graph the image of the figure using the transformation given.



**Practice Problems:**

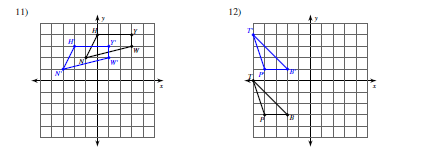
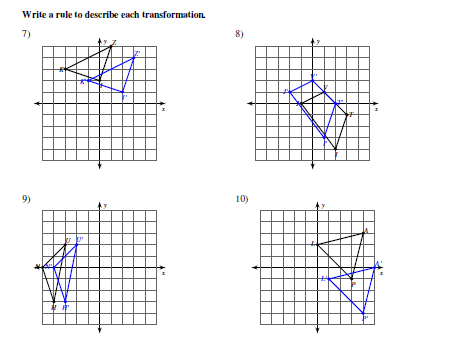
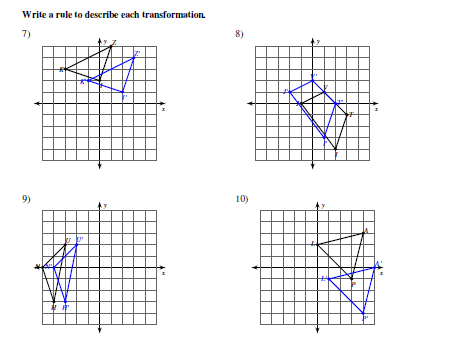
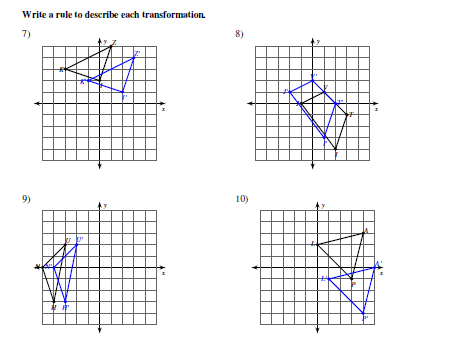
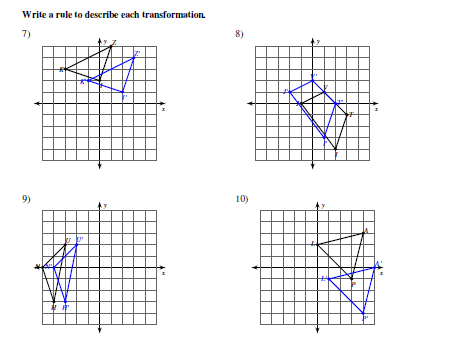


***Symbolic Notation****: For example, if a rule tells me to translate a figure left 3 and up 5, the symbolic notation would be would be   
(x,y)*🡪 *(\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_). This means we subtract 3 from x because we move left, and add 5 to y to move up.*

**YOU TRY:** Translate each rule into symbolic notation:

1. Move right 6 and down 1 b. Move left 4 c. Move up 3, left 2

**MORE PRACTICE:** Write a rule to describe each transformation.



**Unit 4 #3 Dilations**

**Types of Dilations:**

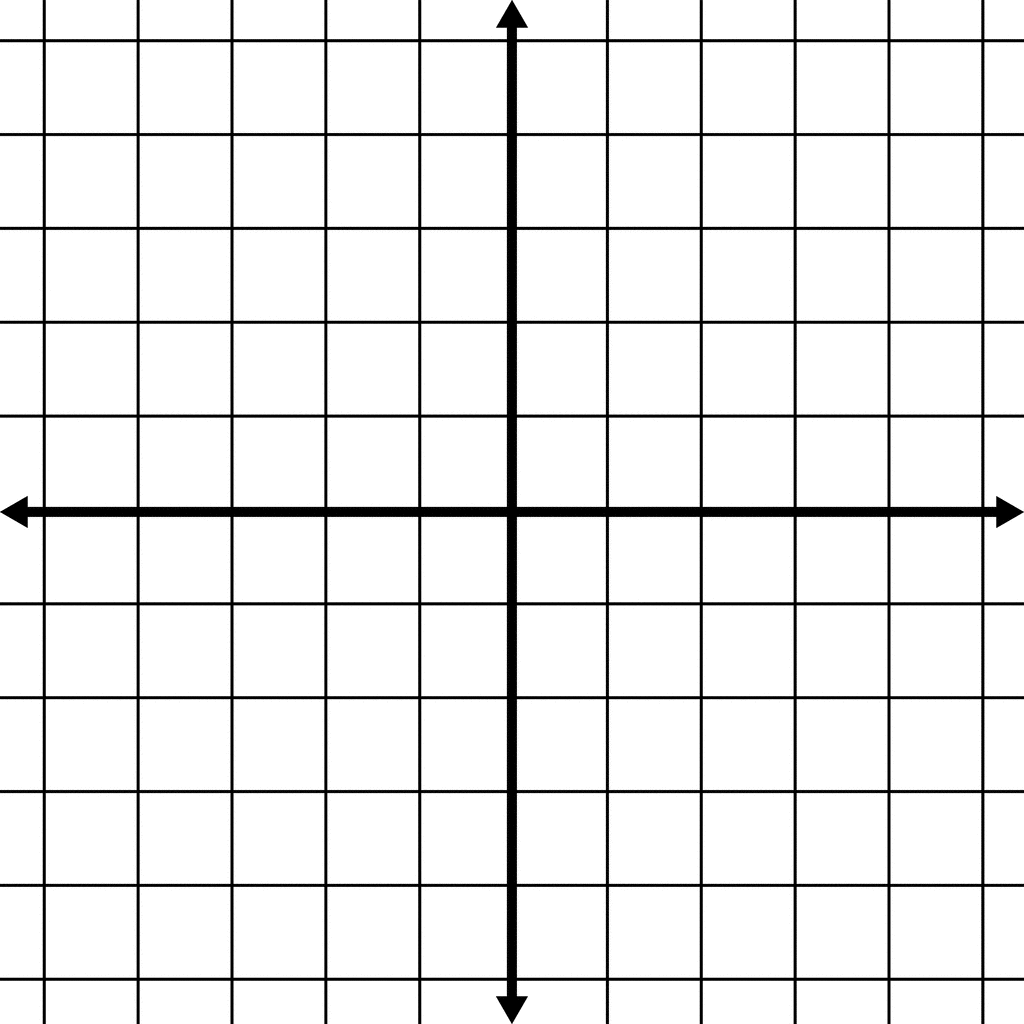
1. Reduction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Enlargement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Congruence:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tips:**

1. Dilation of a segment length: making a segment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. NOT to be used with   
 figures on the coordinate plane!

\*Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Dilations in the coordinate plane: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the scale factor by all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Example 1: Find the measure of S'T', given ST = 3 and r = 4. Example 3: Dilate LMN: L(-2,1) M(4,-1) N(4,3) by a scale factor of ½.

Example 2: Find the measure of ST, given S'T' = 8 and r = -2.

**Unit 4 #3 Dilations**

**Types of Dilations:**

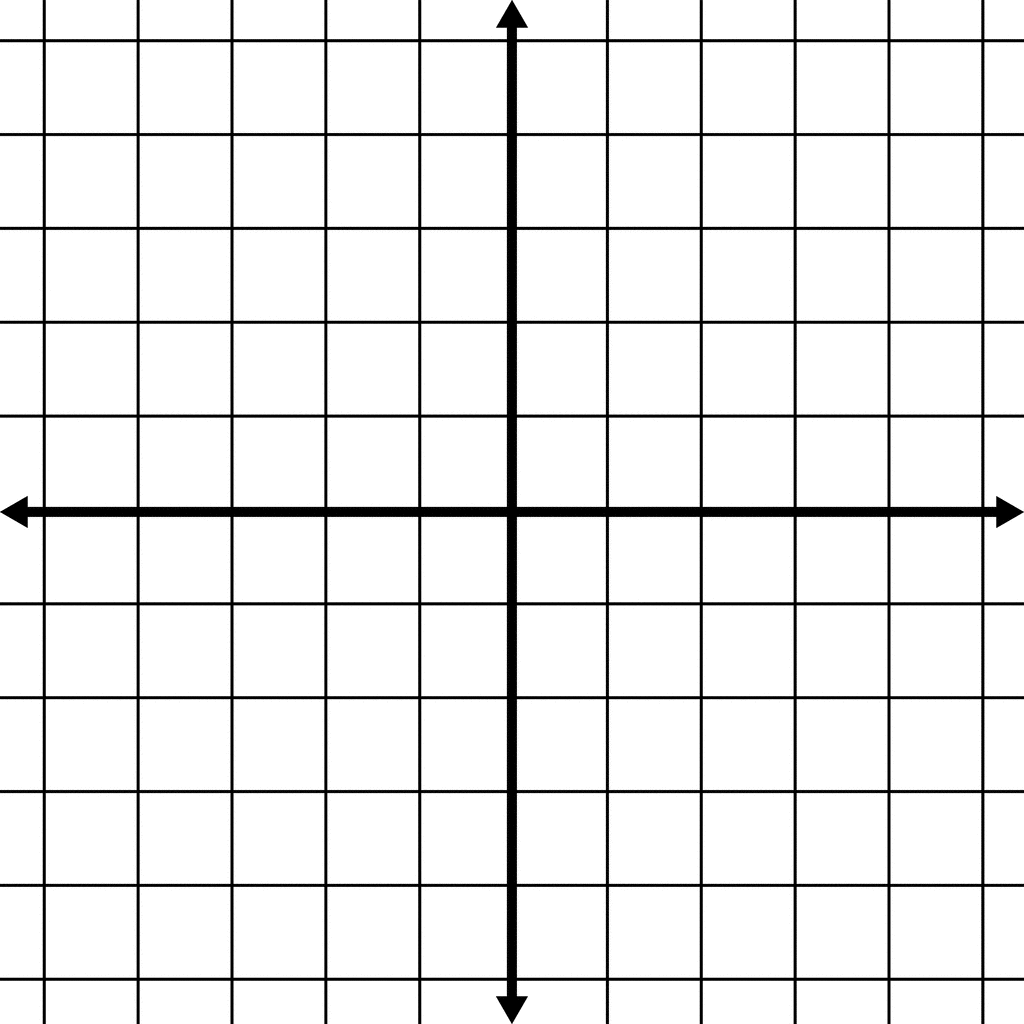
1. Reduction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Enlargement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Congruence:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tips:**

1. Dilation of a segment length: making a segment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. NOT to be used with   
 figures on the coordinate plane!

\*Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Dilations in the coordinate plane: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the scale factor by all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Example 1: Find the measure of S'T', given ST = 3 and r = 4. Example 3: Dilate LMN: L(-2,1) M(4,-1) N(4,3) by a scale factor of ½.

Example 2: Find the measure of ST, given S'T' = 8 and r = -2.