

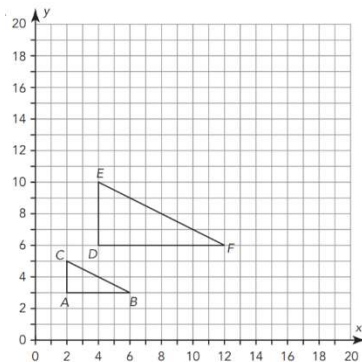
## Module 1: Topic 2 Lesson 3 Assignment—From Here to There

**VOCABULARY**----For questions 1-2, complete the following sentences with the correct term. Use your book to help you.

- When you dilate a figure, you create a \_\_\_\_\_ figure. When two figures are similar, the ratios of their \_\_\_\_\_ side lengths are equal. (page M1-117)
- Figures are \_\_\_\_\_ if they have their corresponding side lengths and corresponding angles are the same measure.

**PRACTICE**----For questions 1-2, Verify that the two figures are similar by describing a dilation that maps one figure onto the other. Be to include the scale factor, and write corresponding sides used to determine scale factor.

1.  $\triangle ABC$  is mapped onto  $\triangle DEF$



This is a/an:

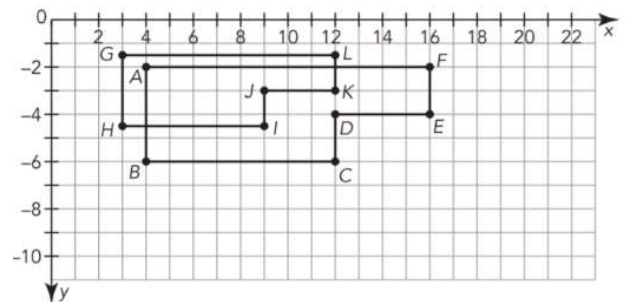
Enlargement or Reduction

I know this because: \_\_\_\_\_

Scale Factor: \_\_\_\_\_

2.

HEXAGON ABCDEF is mapped onto HEXAGON GHIJKL



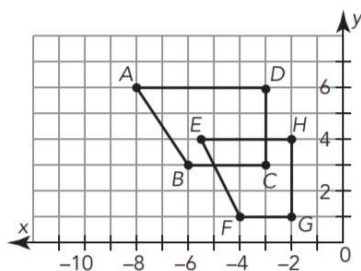
This is a/an:

Enlargement or Reduction

I know this because: \_\_\_\_\_

Scale Factor: \_\_\_\_\_

3. How do you tell that these two figures are not similar figures?



4. Use the coordinates of the pre-image to determine how the triangle was dilated.

Pre-image	Image
X (7, 2)	X' (35, 10)
Y (3, -5)	Y' (15, -25)
Z (-6, 0)	Z' (-30, 0)

Scale Factor: \_\_\_\_\_

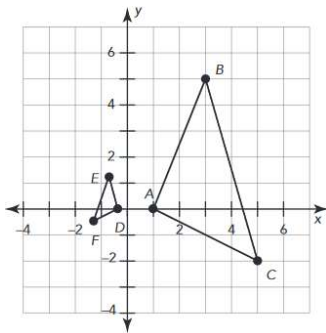
5. Use the coordinates of the pre-image to determine how the triangle was dilated.

Pre-image	Image
A (15, 3)	A' (5, 1)
B (-21, 0)	B' (-7, 0)
C (-6, 18)	C' (-2, 6)

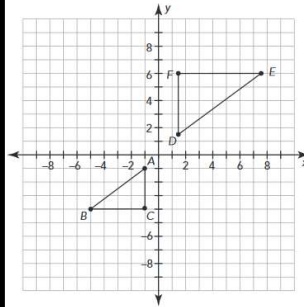
Scale Factor: \_\_\_\_\_

**#6-9 Verify that the figures are similar by describing a sequence of transformations that map Triangle ABC onto Triangle DEF. Be specific.**

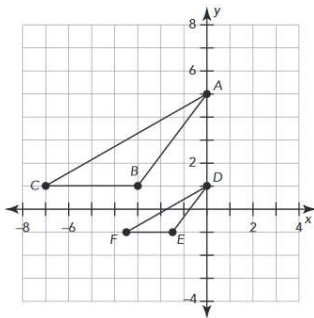
6.



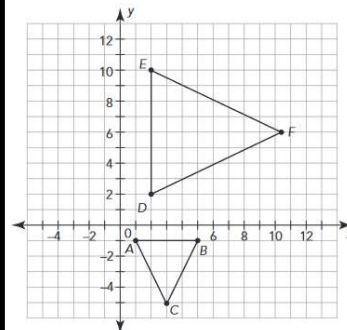
7.



8.



9.



**REVIEW--** Without graphing, give the coordinates of  $\triangle A'B'C'$  after a transformation of  $\triangle ABC$  with the coordinate  $A(6, -3)$ ,  $B(9, 5)$ , and  $C(5, 6)$ . Use the origin as the center of dilation or rotation, as needed.

a. Dilate  $\triangle ABC$  by a scale factor of  $1/3$ .

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

b. Dilate  $\triangle ABC$  by a scale factor of 4.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

c. Rotate  $\triangle ABC$  180 degrees.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

d. Rotate  $\triangle ABC$  90 degrees counterclockwise.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

e. Rotate  $\triangle ABC$  90 degrees clockwise.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

f. Reflect  $\triangle ABC$  across the x-axis.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

g. Reflect  $\triangle ABC$  across the y-axis.

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_

h. Translate  $\triangle ABC$   $(x+3, y-4)$

Pre-Image	Image
A (6, -3)	A'
B (9, 5)	B'
C (5, 6)	C'

Rule: \_\_\_\_\_