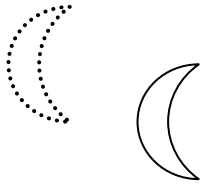
Accel Algebra
Unit 8 Test Review

Name _____

Period _____ Date _____

1. Which Transformation? Say which type of transformation has occurred in each figure (the dashed figure is the preimage; the other figure is the image).

a.



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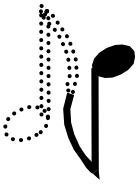
_____

b.



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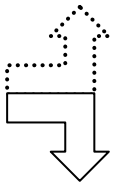
_____

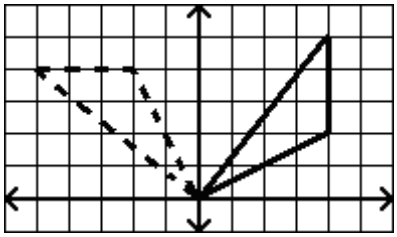
c.



_____

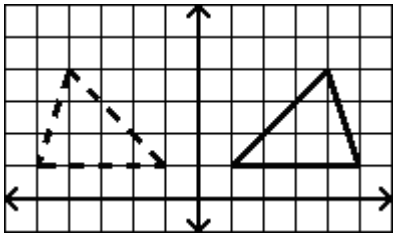
_____

d.



_____

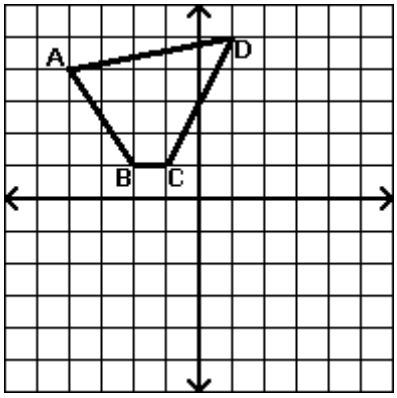
e.



_____

2. Reflections. Reflect each figure as directed.

c.

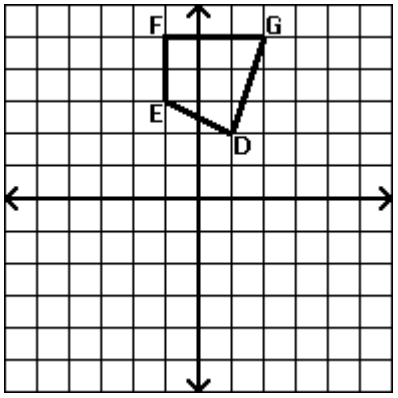


Reflect in the line $x = 1$.

A′( ) B′( )

C′( ) D( )

d.



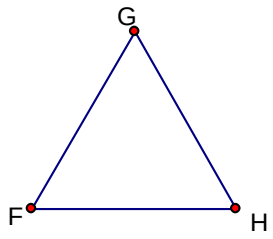
Reflect in the *x-axis*.

F′( ) G′( )

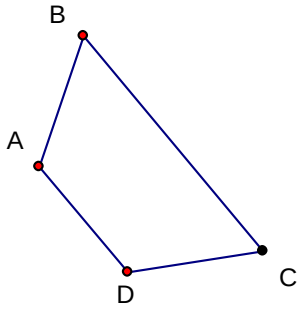
D′( ) E″( )

3. Reflections. Draw the lines of symmetry that will map each figure onto itself.

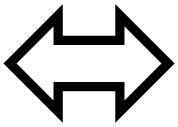
a.



b.

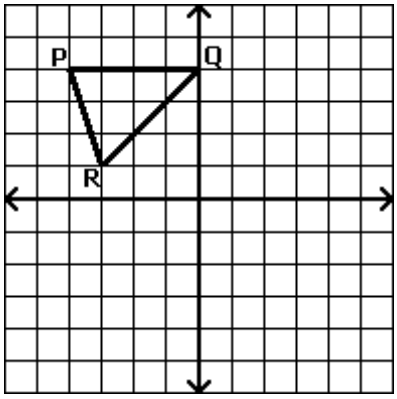


c.



4. Rotations. Rotate each figure as directed.

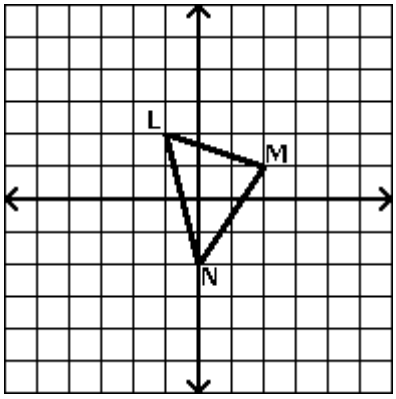
c.



Rotate 90° CW about the origin

P′( ) Q′( ) R′( )

d.

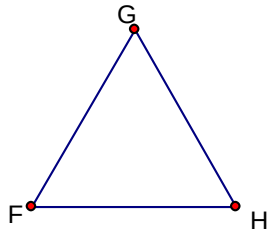


Rotate 180° about the origin.

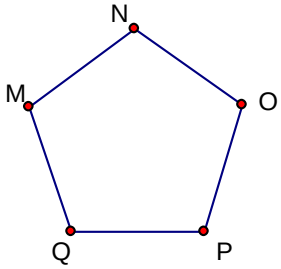
L′( ) M′( ) N′( )

5. Rotations. For each of the following regular polygons, give the angle of rotation required to map the figure onto itself.

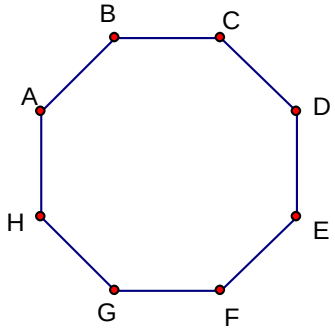
a.



b.

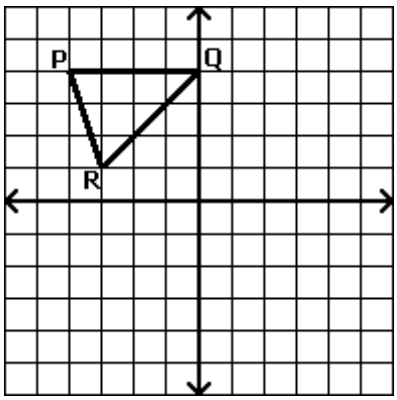


c.



6. Translations. Translate each figure as directed.

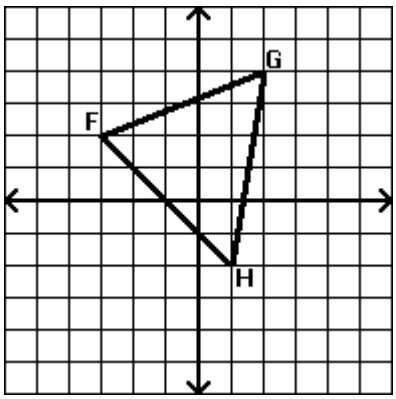
a.



Translate (x, y) → (x + 6, y)

P′( ) Q′( ) R′( )

b.



Translate (x, y) → (x + 2, y - 5)

F′( ) G′( ) H′( )

7. Dilations. For each problem, look at the mapping rule and state whether or not it represents a dilation. If it does state whether or not the image will be similar to the preimage.

a. (x, y) → (3x, 1/2y)

Dilation or not

If dilation will the image be:

Similar or not

b. (x, y) → (x + 6, 6y)

Dilation or not

If dilation will the image be:

Similar or not

c. (x, y) → (2x + 1, 2y + 1)

Dilation or not

If dilation will the image be:

Similar or not

d. (x, y) → (.75x, .75y)

Dilation or not

If dilation will the image be:

Similar or not

e. (x, y) → (x - 5, y - 5)

Dilation or not

If dilation will the image be:

Similar or not

f. (x, y) → (4x, 4y)

Dilation or not

If dilation will the image be:

Similar or not

8. Algebra with Transformations. ∆ABC was mapped to ∆A′B′C′ by a **reflection**. Answer the following questions.

a. Label A′ and B′.

b. Draw the line of reflection.

c. Find the value of each variable.

e = _____ f = _____ g = _____