

Name: _____ Period: _____

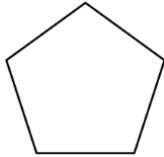
Rigid Transformations Assessment Study Guide

Directions: Read each question carefully. Be sure to include all necessary work and justification in your answer.

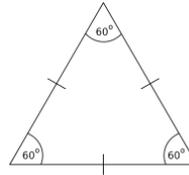
1. For each of the figures below:

- Find all **lines of symmetry**.
- Determine if the figure has **rotation symmetry**.

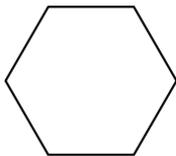
a. Regular Pentagon



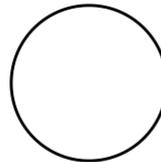
b. Equilateral Triangle



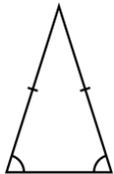
c. Regular Hexagon



d. Circle



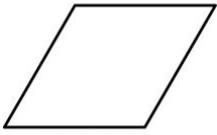
e. Isosceles Triangle



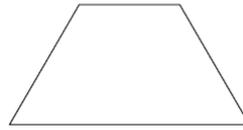
f. Parallelogram



g. Rhombus

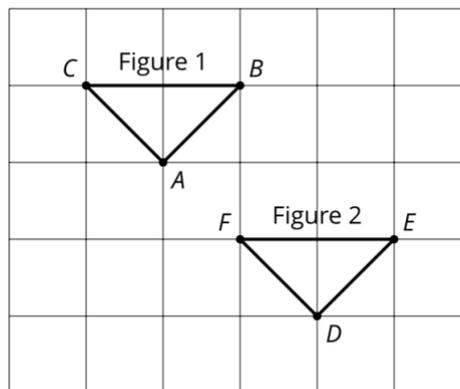


h. Isosceles Trapezoid



2. The figures are congruent. Select all the sequences of transformations that would take Figure 1 to Figure 2.

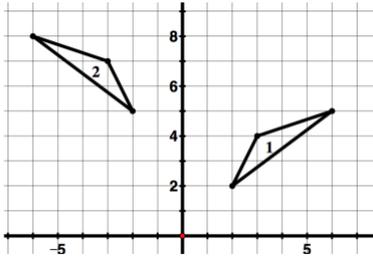
- (1) Translate by directed line segment AD.
- (2) Rotate 180 degrees around point E.
- (3) Translate by directed line segment AE and reflect across AC.
- (4) Translate by directed line segment CE and rotate 90 degrees counterclockwise around point E.
- (5) Rotate 180 degrees around point C, translate by directed line segment CE, and reflect across segment EF.
- (6) Reflect across segment AB, rotate clockwise by angle BFE using center F, then reflect across segment EF.



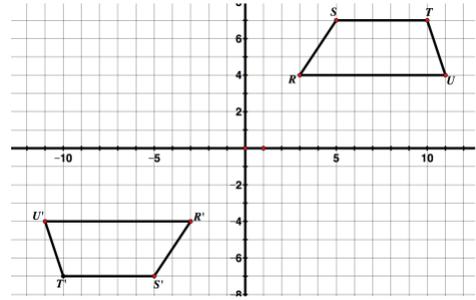
Statement #	True or False?	Reason
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		

3. For each of the diagrams below, determine a sequence of rigid transformations that would take each pre-image to its image.

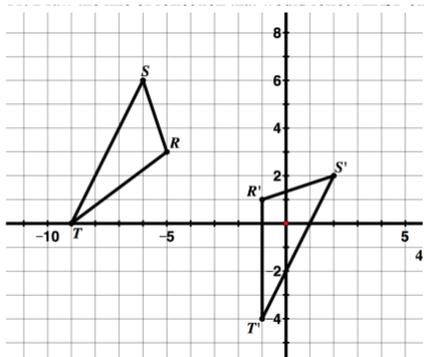
a. Assume figure 1 is the pre-image of figure 2.



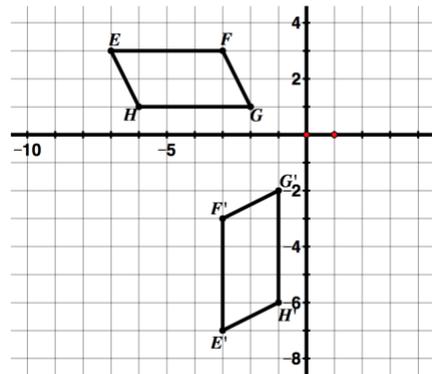
b.



c.

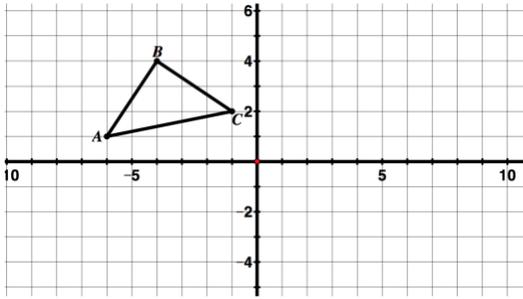


d.



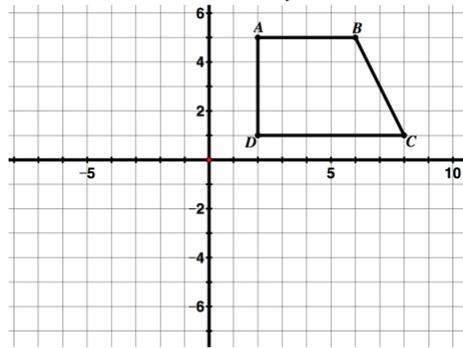
4. Perform the indicated rigid transformations.

a.



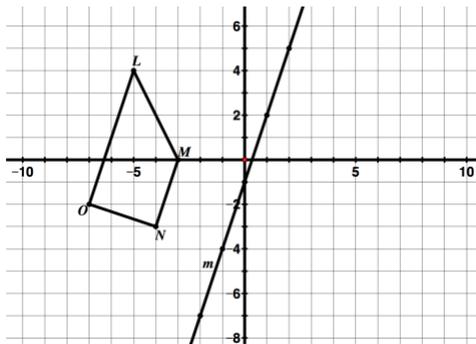
- (1) Reflect ABC over the y-axis. Label the image $A'B'C'$
- (2) Rotate ABC 90° counter-clockwise about the origin. Label the image $A''B''C''$.
- (3) Translate ABC, so that A''' is at the point $(-1, -4)$.

b.



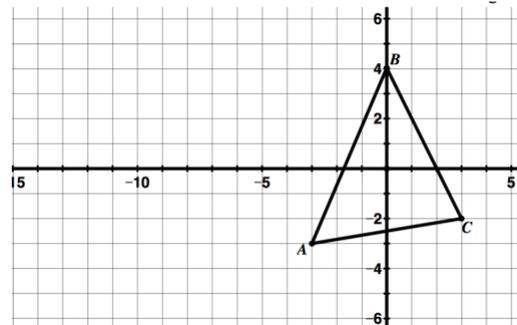
- (1) Reflect ABCD over the x-axis. Label the image $A'B'C'D'$.
- (2) Rotate ABCD 180° about the origin. Label the image $A''B''C''D''$.
- (3) Translate ABCD, so that A''' is at the point $(-7, 6)$.

c.



- (1) Reflect LMNO over line m. Label the image $L'M'N'O'$.
- (2) Rotate LMNO 90° clockwise about point M. Label the image $L''M''N''O''$.
- (3) Translate LMNO, so that L''' is on the point $(3, 8)$.

d.



- (1) Reflect ABC over the x-axis. Label the image $A'B'C'$.
- (2) Rotate ABC 90° counter-clockwise about the point $(-4, -3)$. Label the image $A''B''C''$.
- (3) Translate ABC, so that B''' is on the point $(-10, 6)$.