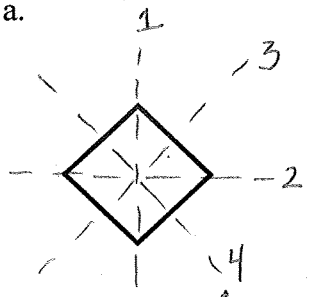
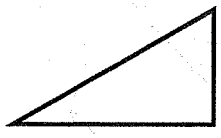
Name: Answer Key

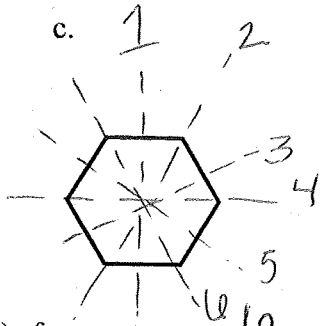
Date: _____

Review Sheet: 9.1-9.3 Quiz

1. Determine how many lines of symmetry each figure has. Then determine whether it has point symmetry.

a. 

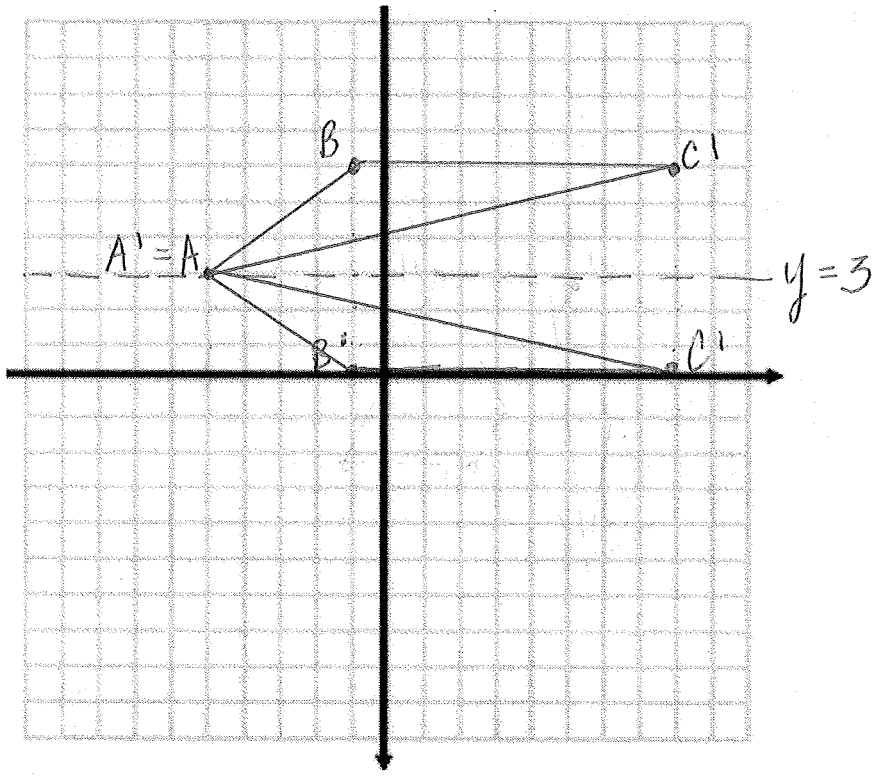
b. 

c. 

a. Line(s) of symmetry: 4 b. Line(s) of symmetry: ∅ c. Line(s) of symmetry: 6

a. Point Symmetry: yes b. Point Symmetry: no c. Point Symmetry: yes

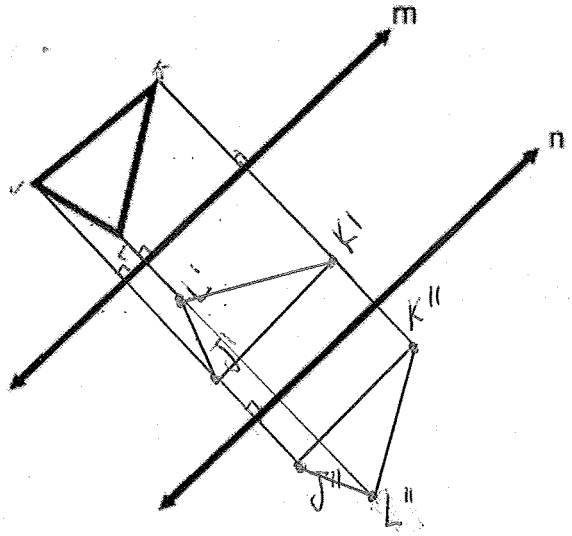
2. Reflect ΔABC with vertices A(-5,3), B(-1,6), and C(8,6) over the line y = 3.



3. Name the coordinates of the image of L(-8,4) reflected over:
   a. The origin: (8, -4)
   b. Y-axis: (8, 4)
   c. X-axis: (-8, -4)
   d. Line y=x: (4, -8)

4. Lines m and n are parallel to each other. Draw the translation of the image of ΔKJL over m and then n. BE SURE TO LABEL EACH VERTEX CORRECTLY.

a.

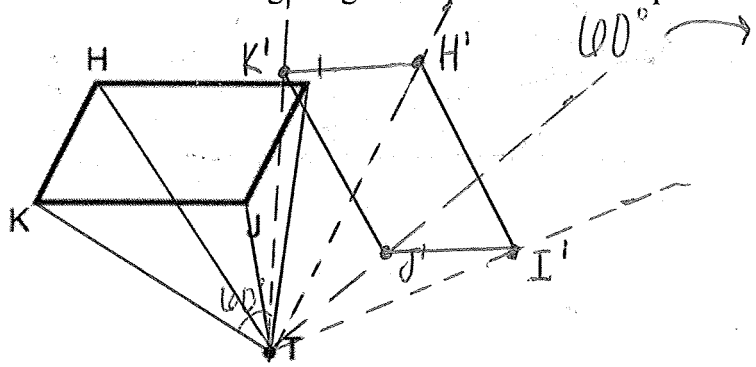


b. Reflecting over two parallel lines results in a translation.

c. Reflecting over two intersecting lines results in a rotation

5. Complete the following statement: The image of W(4,-7) under the translation (x,y) → (X-5, y+4) is W'(-1, -3). W(4,-7) → (X-5, y+4) → W'(-1,-3)

6. Rotate the following image 60° clockwise about point T.



7. Two intersecting lines form an acute angle of 65°. Find the measure of the angle of rotation if a figure is reflected over the intersecting lines.

Angle of rotation: 130° 65° * 2 = 130°

8. Why is ΔX'Y'Z' where X'(4,-2), Y'(7,-1), and Z'(8,-5) NOT a translation image of ΔXYZ where X(-4, 2), Y(-7, 1), and Z(-8, 5)? Be specific.

X(-4, 2) → (X+8, y-4) → X'(4,-2)

Y(-7, 1) → (X+14, y-2) → Y'(7,-1)

NOT THE SAME TRANSLATION!

Distances must be the same & they are not because each coordinate uses a different translation.