Name:____ Period:______ Date:____________________

Unit 4: Transformations Practice Test

1. Find the coordinates of A'B' after translating A(-2, 0) B(7, 12) along the vector <8, -15>. Then find the magnitude of the vector.

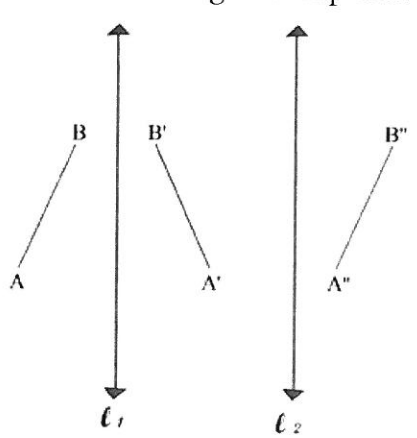
2. Point C(a + 5, -15 + b) is translated with the rule (x – 7, y + 11) to create image C'(2a – 10, -6). Find a and b.

3. Find the component form of the vector that translates point D(-11, -23) to point D'(-20, 5).

4. On a separate piece of graph paper, reflect triangle E(-3, 4) F(0, -2) G(-6, 6) over the y-axis to create E'F'G'. Then take E'F'G' and rotate it 90 degrees counterclockwise to create E"F"G". Record the coordinates of the images below.

5. On a separate piece of graph paper, rotate triangle H(5, 2) I(2, 1) J(3, 0) 180 degrees clockwise about the origin to create H'I'J'. Then take H'I'J' and reflect it over the line y = -1 to create H"I"J". Record the coordinates of the images below.

6. In the picture below, AB is reflected over line 1, then A'B' is reflected over line 2. You could also translate AB 19 units to the right to map onto A"B". If lines 1 and 2 are parallel, how far apart are they from each other?



7. Reflecting over the y-axis, then the x-axis is equivalent to rotating the pre-image how many degrees? What if you did the same thing, except you reflected over two lines that formed a 62° angle? What rotation is that equivalent to?

8. On a separate piece of graph paper, find the image after dilating the quadrilateral K(-12, 4) L(0, 8) O(8, 0) M(-4, -4) about the origin with a scale factor of k = -1/4. Is the image smaller or larger than the pre-image? Why? KLOM and K'L'O'M' are called what type of figures?

9. The larger triangle is a dilation of the smaller triangle. Find the scale factor. Then, solve for x and y. Show all your work. (Hint: You have to solve for x and y).

Scale Factor: ______________

X = ______________________

Y = ______________________