Review for Test #6 – Transformations and Angle Relationships

Name _____ Class _____

1.) Circle all the letters that have vertical line symmetry.

A B C D E

2.) Circle all the letters that have horizontal line symmetry.

C D E F G

3.) Circle all the letters that have point symmetry.

C E H N T

4.) Find the coordinates of the image of point B(5,3) after a *dilation* with a scale factor of 8.

_____

5.) What is the image of triangle TGI with coordinates T(-12,0), G(0,54) and I(24,42) after a dilation of $\frac{1}{6}$? _____

6.) What is the scale factor of a dilation that maps A(5,7) to A'(45,63)? _____

7.) A triangle has a perimeter of 40. What is the perimeter when the following transformations occur?

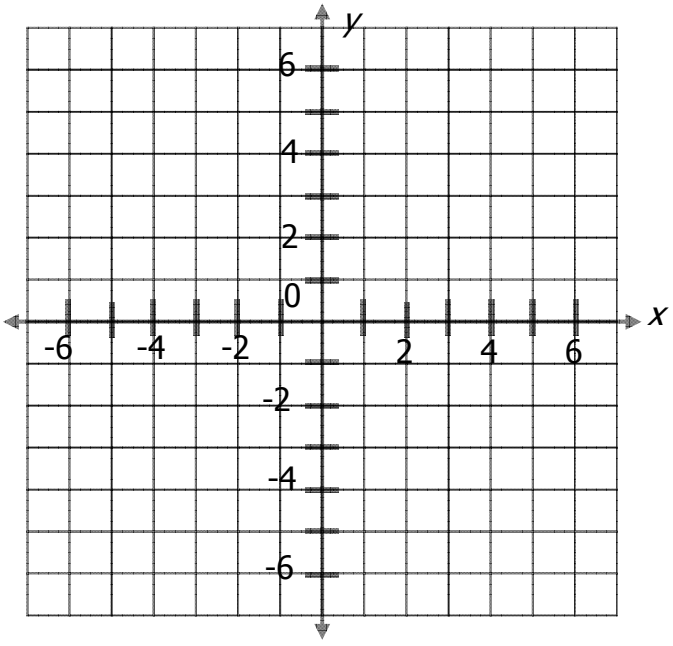
a.) a dilation of 4 _____

b.) a reflection over the *x*-axis _____

c.) a translation 7 units up _____

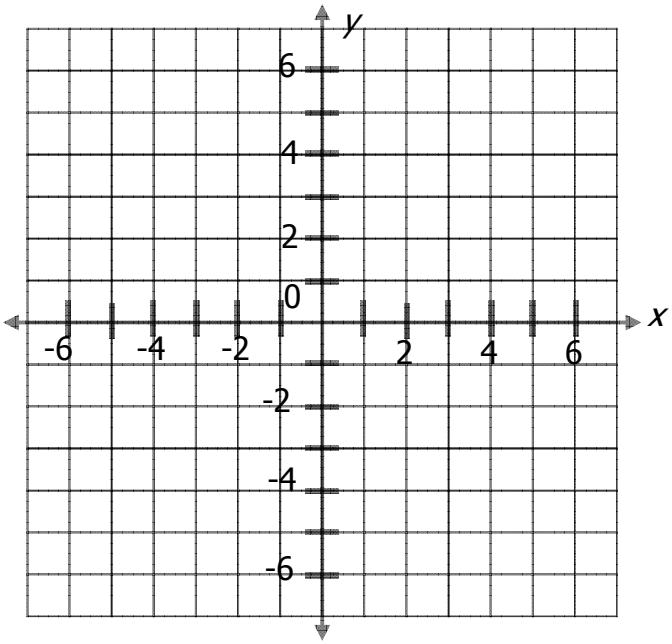
d.) a rotation 180° clockwise _____

8.) Graph triangle ΔABC with coordinates A(3,4), B(5,3) and C(4,-1). Then graph ΔA'B'C' after a reflection in the line $y = -x$. What are the coordinates of ΔA'B'C'?



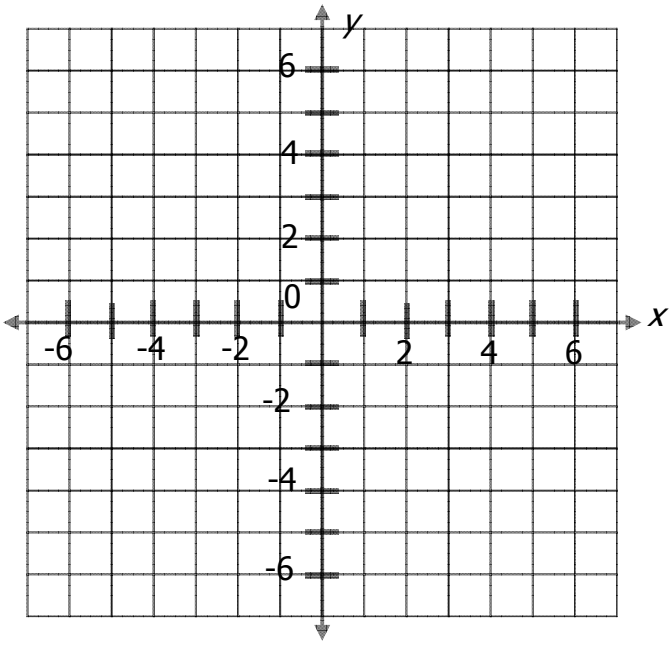
9.) Graph triangle ABC with coordinates $A(6,1)$, $B(7,3)$, and $C(4,6)$.

a.) Graph ΔABC after a reflection in the line $x = 2$. State the coordinates.



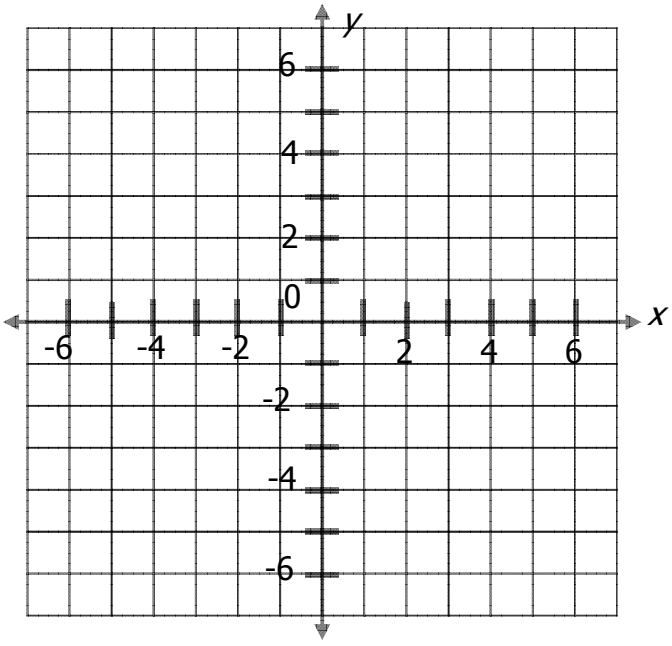
b.) Graph $\Delta A'B'C'$ after a reflection in the line $y = 4$. State the coordinates.

10.) What are the coordinates of Q(3,1) after a translation that follows the rule $(x, y) \rightarrow (x-7, y+4)$

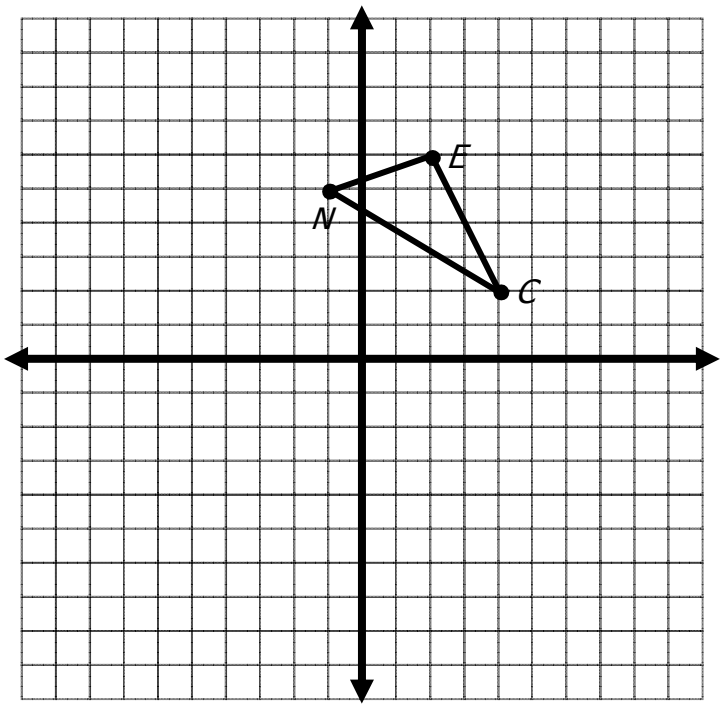


11.) Graph trapezoid ABCD with coordinates A(2,4), B(2,6), C(5,6), and D(4,4). Then rotate the quadrilateral 90° clockwise. Graph that and label the new coordinates.

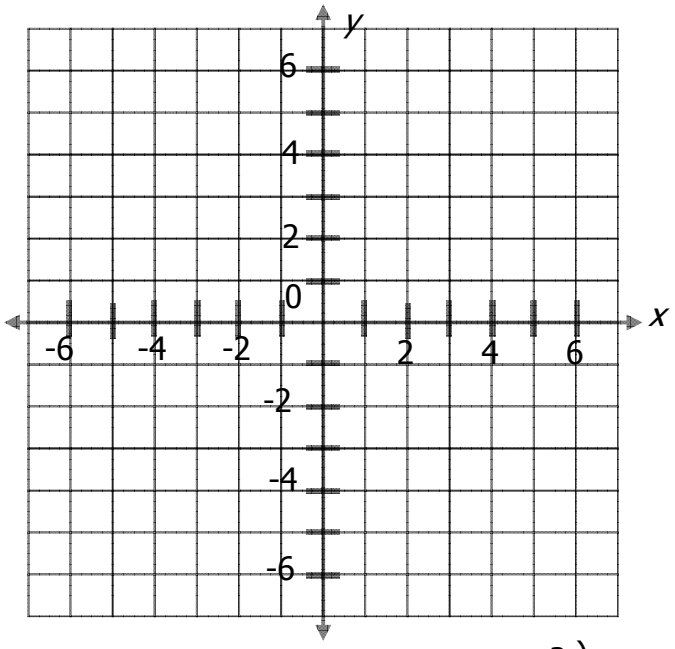
12.) On the graph to the right, graph ΔABC with coordinates A(-2,1), B(-4,4), and C(0,2). Then, graph ΔA'B'C' after a dilation with scale factor 2. What are the new coordinates?



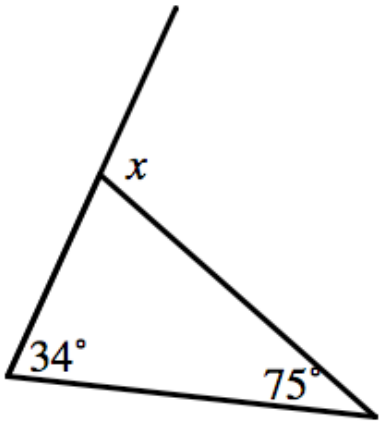
13.) Jenna drew the shape on the grid. Draw a *translation* of ΔENC four units down and one unit to the right. What are the new coordinates?



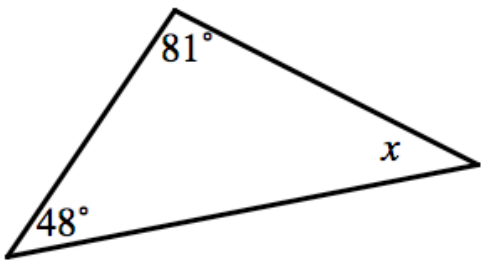
14.) Graph Δ*ABC* with coordinates *A*(2,5), *B*(2,1), and *C*(6,3). Then graph Δ*A′B′C′* the image of Δ*ABC* after a 270° counterclockwise rotation.



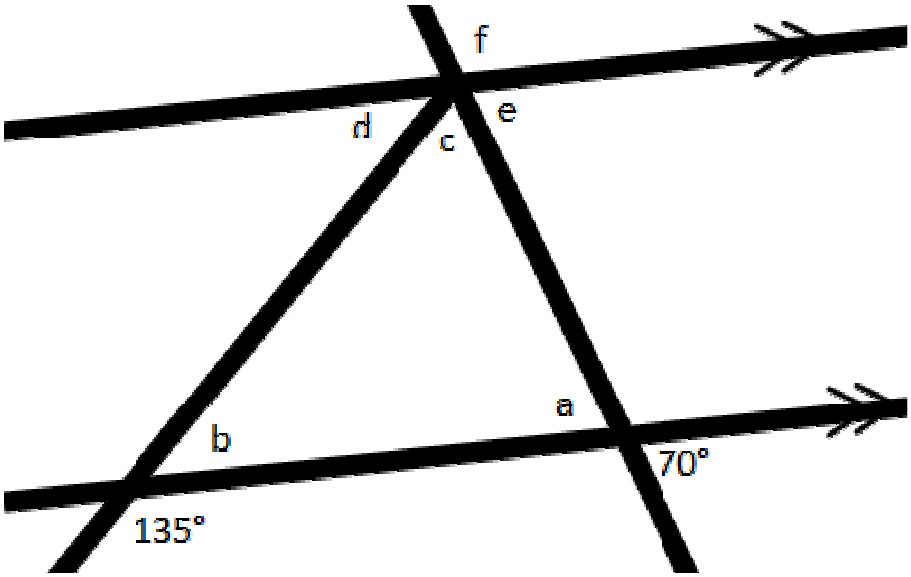
15.) Find the value of *x* in each diagram below.



b.)



16.) Find the missing angles in the diagram below. Write explanations of how you know the answer. Make sure to use specific vocabulary words to justify your answers.



a.) $m\angle a =$ _____ Explanation: _____

_____

b.) $m\angle b =$ _____ Explanation: _____

_____

c.) $m\angle c =$ _____ Explanation: _____

_____

d.) $m\angle d =$ _____ Explanation: _____

_____

e.) $m\angle e =$ _____ Explanation: _____

_____

f.) $m\angle f =$ _____ Explanation: _____

_____

Don't forget to go to the website to check your answers to this review sheet.

http://shehatamath.weebly.com