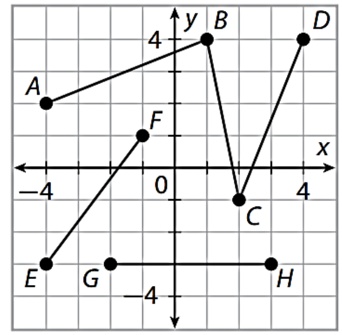
Name: ______________________________

1.REV.3 – END OF CHAPTER REVIEW

Past due on: ___________ Period: ______



1. Is $\overline{EF} \cong \overline{GH}$? Show work and explain your reasoning.

2. Is $\overline{AB} \perp \overline{BC}$? Show work and explain your reasoning.

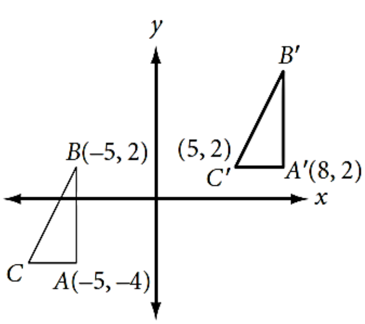
3. Find the coordinates of point P, that lies $\frac{2}{3}$ of the way on the directed line segment $\overline{AB}$, with endpoints $A(-2, 5)$& $B(4, 9)$.

4. Find the coordinates of point R that lies on the directed line segment $\overline{QM}$, with endpoints $M(-9, -5)$& $Q(3, 5)$ and partitions the segment at a ratio of 2:5.

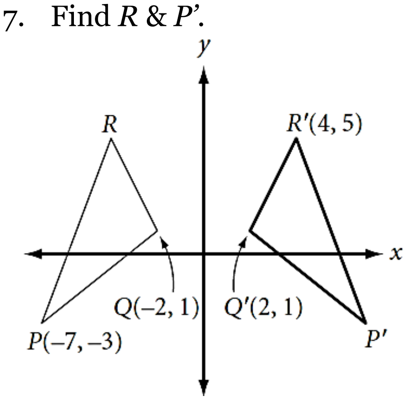
5. A translation moves $P(3, 5) \rightarrow P'(6, 1)$.
   a. Describe the translation.
   b. What are the coordinates of the image of point (−3,−5) under the same translation?

Describe the transformation shown **AND** find the missing coordinates.

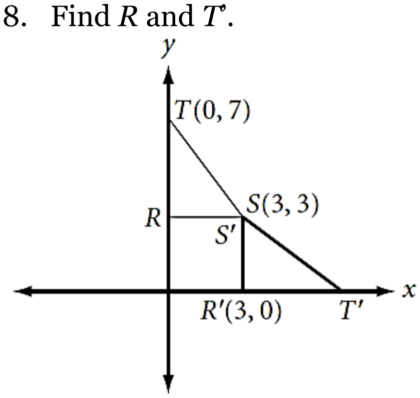
6. Find *C* & *B*'.



7. Find *R* & *P*'.

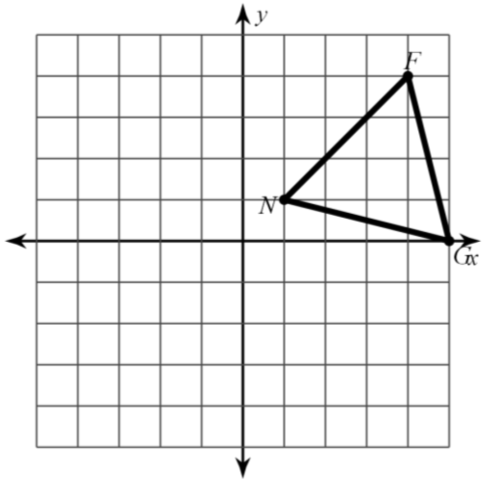


8. Find *R* and *T*'.

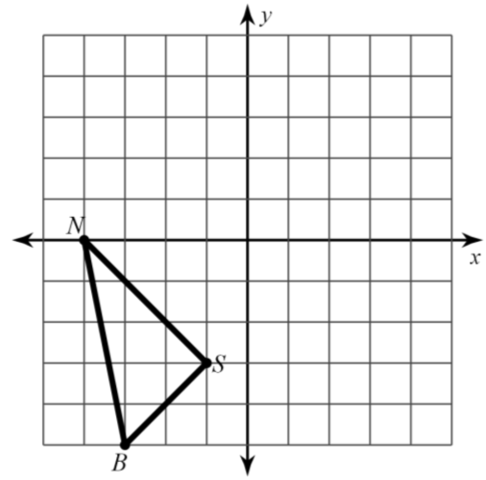


Draw and label the image after performing the sequence of transformations.

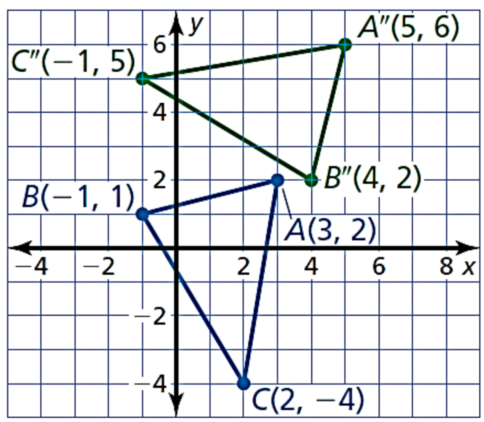
9. Rotate $\triangle FNG$ 180° and then translate it 5 units up and 3 units right.



10. Reflect $\triangle BNS$ over $x = 1$, then rotate it 90° counterclockwise. Lastly, translate it left 3 units and down 2 units.



11. Describe the sequence of transformations that maps $\triangle ABC$ onto $\triangle A''B''C''$.



12. Consider $\overline{NY}$ with endpoints $N(-11, 5)$& $Y(5, -7)$. Follow the steps the find the equation of the line that is the perpendicular bisector to $\overline{NY}$.
    a. In order to find the equation of a *perpendicular* line we first need to know the ***slope*** of $\overline{NY}$.

    b. What would be the slope of the line perpendicular to $\overline{NY}$?

    c. Find the "bisector" (***the midpoint)***.

    d. Using the slope from *b* and the point from *c*, find the equation of the perpendicular bisector of $\overline{NY}$.

Write an equation of the line to satisfy the given conditions. The final equation should be written in slope-intercept form.

13. The line is parallel to $y = 2x - 7$ and passes through the point $(2, -5)$.

14. The line is perpendicular to $y = 5x - 3$ and passes through the point $(2, 1)$.

15. Are the lines parallel, perpendicular, or neither?

a. $\begin{cases} y = -0.5x + 4 \\ y - 2x = 4 \end{cases}$

b. $\begin{cases} y - x = 4 \\ x + y = 5 \end{cases}$

c. $\begin{cases} 5x + y = 7 \\ y = 5x + 1 \end{cases}$

d. $\begin{cases} 2x + y = 4 \\ 2y + 4x = 16 \end{cases}$

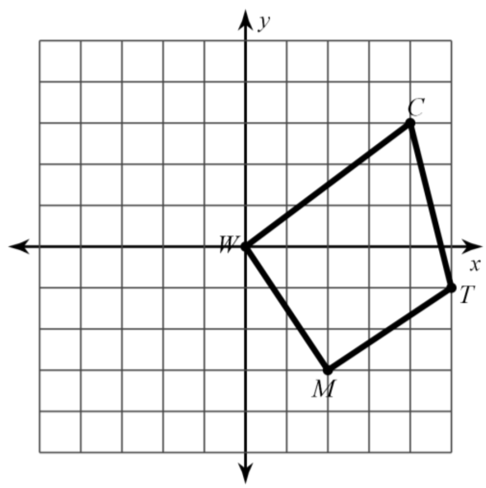
16. Determine the perimeter and the area of the composite figure. *Round your answers to the nearest hundredth, if necessary.*

RECORD THE SIDE LENGTHS BELOW.

CW = ______ *CT* = ______

MW = ______ *MT* = ______

Perimeter: ____________ Area: ___________



17. Determine the perimeter and the area of the composite figure. *Round your answers to the nearest hundredth, if necessary.*

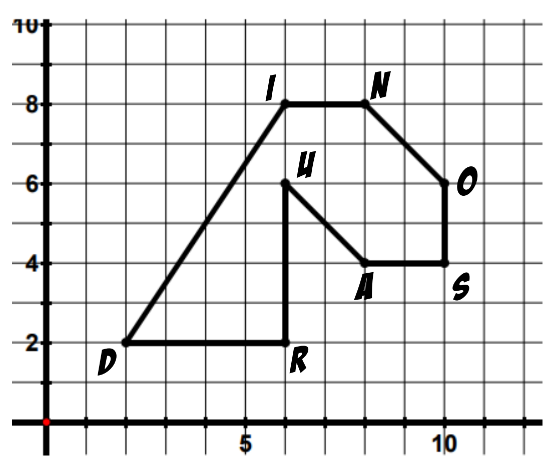
RECORD THE SIDE LENGTHS BELOW.

DI = ______ *IN* = ______ *NO* = ______

OS = ______ *SA* = ______ *AU* = ______

UR = ______ *RD* = ______

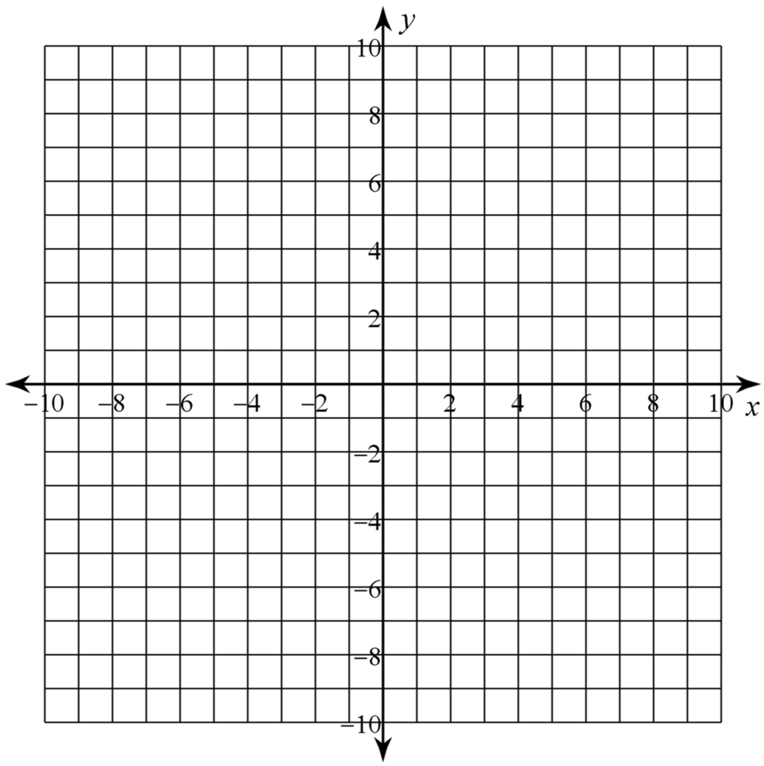
Perimeter: ____________ Area: ___________



In the space provided, create your own composite figure that incorporates the following:

- At least six sides.
- At most HALF of the sides can be horizontal and/or vertical.
- Each vertex is labeled with a different letter.
- Each quadrant is used.

Look at Problem 17 for an example of what is expected.



Then, determine the perimeter and area of your composite figure.