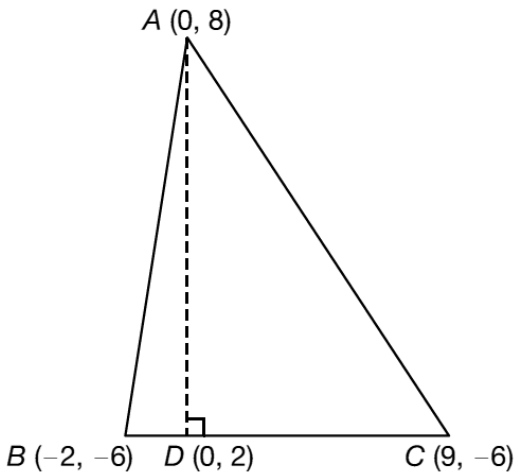
Name: _____

Past due on: _____ Period: _____

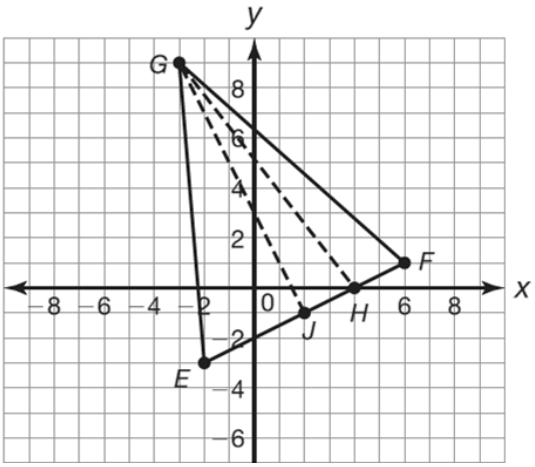
3.2.D1 – Area & Perimeter of Triangles

Show all work on a separate sheet of paper.

1. Four points and their coordinates are given.
   a. Compute the perimeter and area of $\triangle ABC$.
   b. Use the Pythagorean Theorem to determine whether $\triangle ABC$ a right triangle.

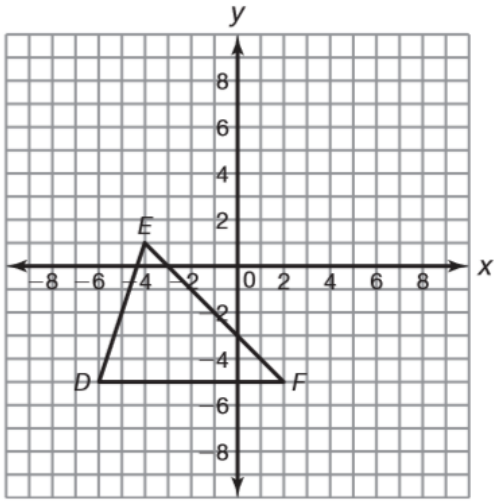


2. Cisco claims that $\overline{GH}$ is the height of $\triangle EFG$, and Beth claims that $\overline{GJ}$ is the height of $\triangle EFG$.
   a. Who is correct? Support your answer with mathematics.
   b. Calculate the area of $\triangle EFG$.

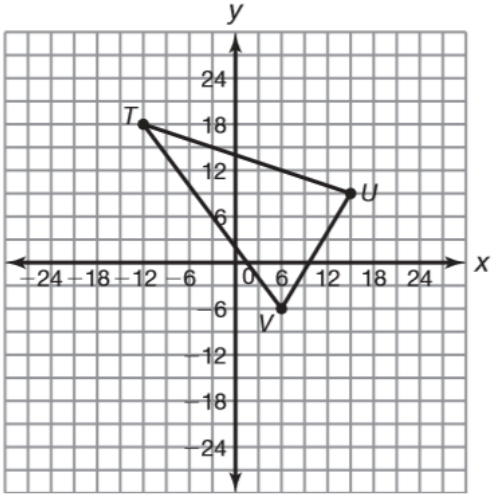


Translate each triangle such that one vertex of the image is located at the origin and label the vertices of the translated image. Determine its perimeter. Round your answer to the nearest hundredth, if necessary.

3. $\triangle DEF$

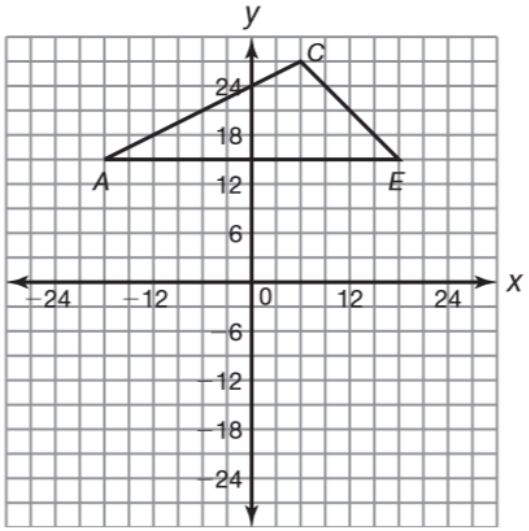


4. $\triangle TUV$

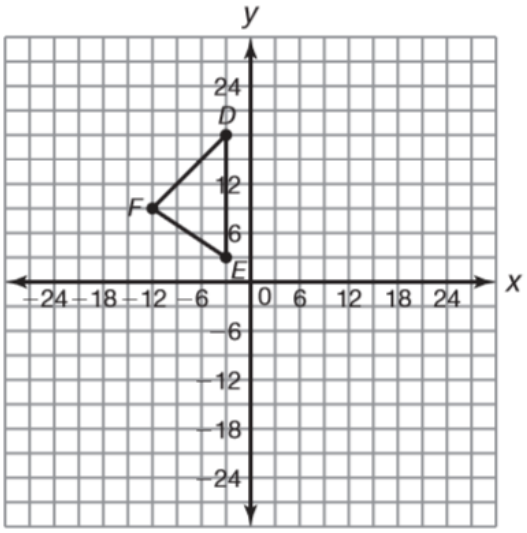


Translate each triangle such that one vertex of the image is located at the origin and label the vertices of the translated image. Determine its area. Round your answer to the nearest hundredth, if necessary.

5. $\triangle ACE$

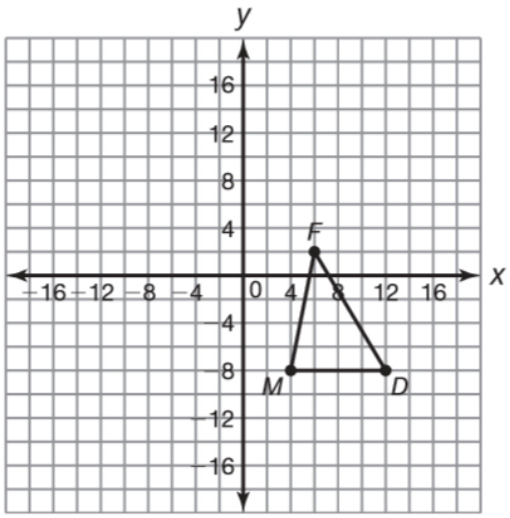


6. $\triangle DEF$



7. Double the area of $\triangle MFD$ by manipulating the base. Label the image $M'FD$.

   Calculate the area of the pre-image and the area of the image to verify your solution.



8. Double the area of $\triangle MLP$ by manipulating the height. Label the image MLP'.

   Calculate the area of the pre-image and the area of the image to verify your solution.