

Name: _____

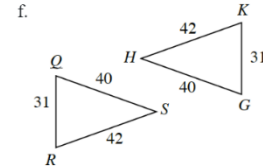
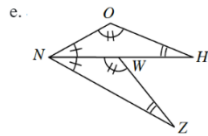
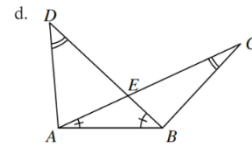
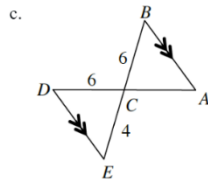
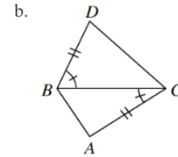
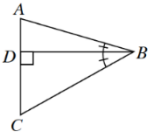
Period: _____ Date: _____

Homework 2.1.1

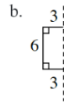
1. The diagrams below are not necessarily drawn to scale. For each pair of triangles:

- Determine if the two triangles are congruent.
- If the triangles are congruent, write a congruence statement (such as $\triangle PQR \cong \triangle XYZ$) and give the congruence theorem (such as SAS).
- If the triangles are not congruent, or if there is not enough information to determine congruence, write “cannot be determined” and explain why not.

a. \overline{AC} is a straight segment:



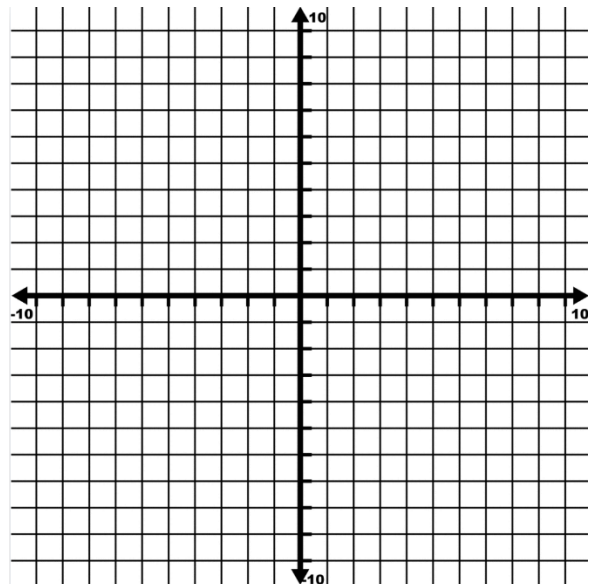
2. When the shapes below are reflected across the given line of reflection, the original shape and the image (reflection) create a new shape. For each reflection below, name the new shape that is created.



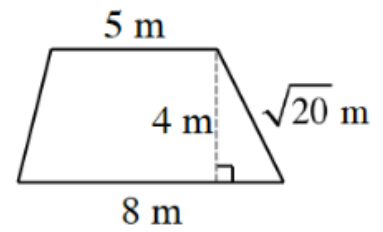
3. Plot the following points on a sheet of graph paper and connect them in the order given. Then connect points A and D.

$$A(-3, 4), B(1, 6), C(5, -2), \text{ and } D(1, -4)$$

- a. A rectangle is a four-sided polygon with four right angles. Does the shape you graphed appear to be a rectangle? Use slope to justify your answer.



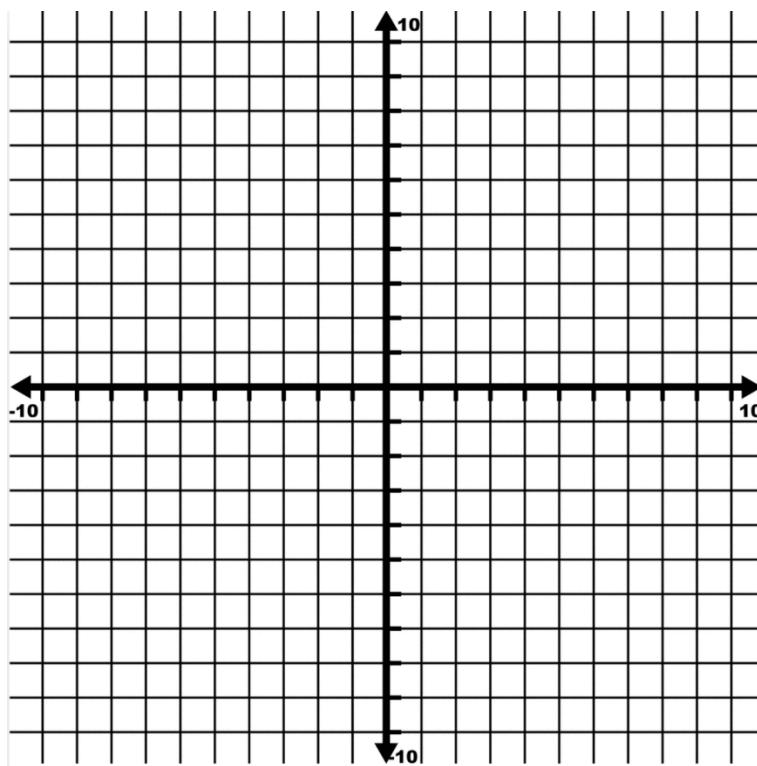
4. Determine the area and perimeter of the trapezoid at right.



5. Make a complete graph of the equations below on the same set of axes and label the point of intersection with its coordinates.

$$y = 2x + 3$$

$$y = x + 1$$



6. Misty is building a triangular planting bed. Two of the sides have lengths of eight feet and five feet. What are the possible lengths for the third side?