

Name _____

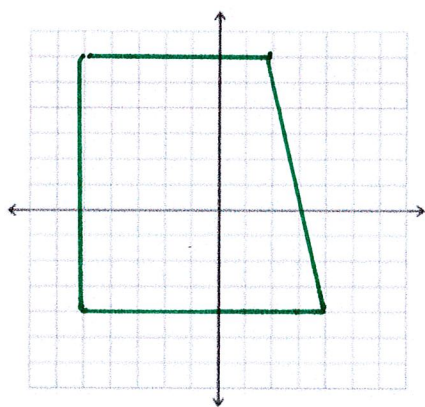
Transformation TH HW 4

1. construct the perpendicular bisector to \overline{PQ}
(hint: the steps are on hw 3, and on mathopenref.com)



2. list the steps in order for the perpendicular bisector construction:

3. find the area of the figure



4. Label each statement as

A Formal definition

B description

C other: there are three undefined terms in Geometry!

1. _____ A plane is a thin surface that extends indefinitely in all directions

2. _____ A point is a location

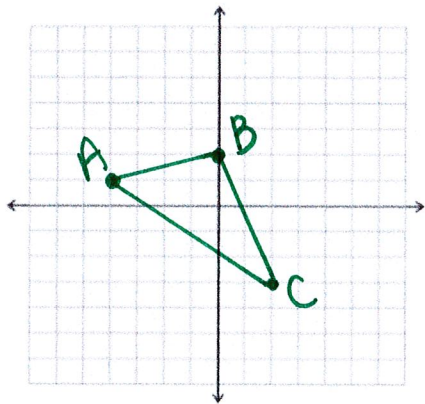
3. _____ A line is a series of points that extends indefinitely in both directions

4. _____ Opposite rays must start with the same letter and go in different directions

5. _____ A circle is the locus of all points equidistant to a central point.

5. Dilate with a scale factor of 2 with center A.

Name the parallel sides: *(hint: count from the center!)*



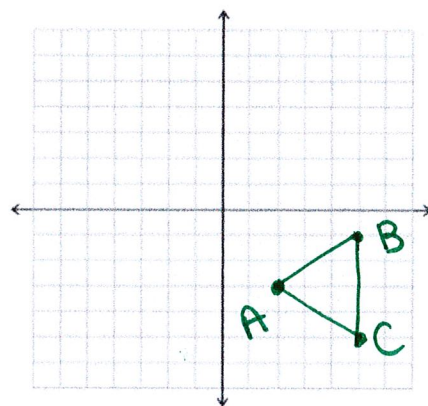
6. rotate 90° counterclockwise about the origin, then reflect over the y axis

Name the coordinates:

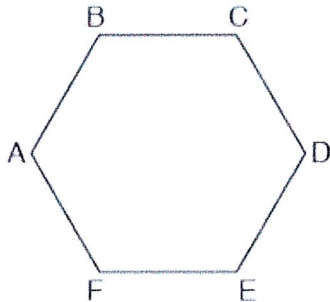
A' _____

B' _____

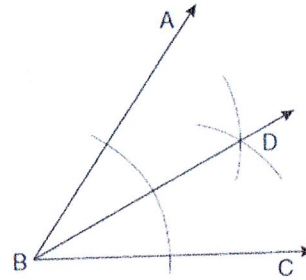
C' _____



7. State the image if you rotate point B 240° counterclockwise about the center of the hexagon,

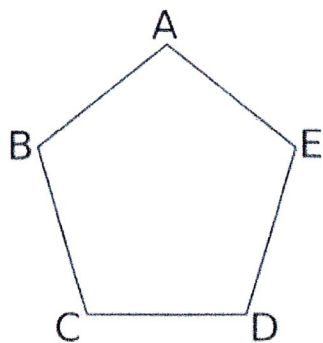


8. Based on the construction below, which statement must be true?

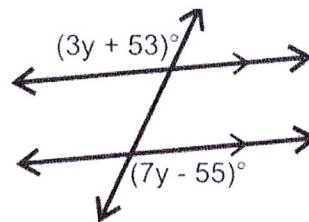


- 1) $m\angle ABD = \frac{1}{2}m\angle CBD$
- 2) $m\angle ABD = m\angle CBD$
- 3) $m\angle ABD = m\angle ABC$
- 4) $m\angle CBD = \frac{1}{2}m\angle ABD$

9. How many degrees would you rotate counterclockwise to map \overline{AB} onto \overline{CD} ?



10. solve for y:



11. Consider a regular decagon.
State the number of lines of symmetry:

State the angle of rotation: _____

12. Consider a regular octagon.
State the number of lines of symmetry:

State the angle of rotation: _____