

# hint sheet

Name \_\_\_\_\_

TH #8

1. The following are steps to the **perpendicular bisector construction**, out of order. Place the correct numbers next to each step.

\_\_\_\_\_ Draw an arc above and below the segment (or a semicircle)

\_\_\_\_\_ use a straightedge to connect the intersections of the arcs.

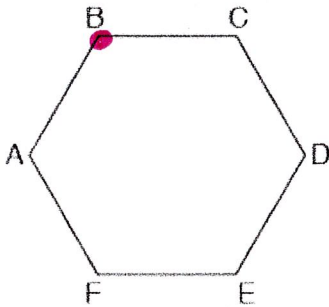
\_\_\_\_\_ Start with  $\overline{PQ}$ , place your compass on P and open it to more than halfway across the segment.

\_\_\_\_\_ without changing the compass setting, place your compass on Q and make arcs above and below the segment (or semicircles)

2. Construct the perpendicular bisector  $\overline{PQ}$



3. State the image if you rotate point B  $180^\circ$  counterclockwise about the center of the hexagon

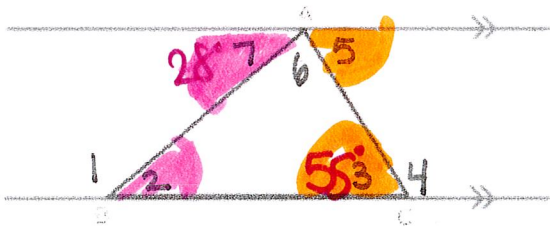


$\frac{360^\circ}{6 \text{ sides}} =$

4. Write the equation of a line PERPENDICULAR to the line  $y = -2x + 6$  and passes through  $(-16, 20)$

5. solve for the missing angles.  $m\angle 3 = 55^\circ$  and  $m\angle 7 = 28^\circ$

$m\angle 1$  \_\_\_\_\_  $m\angle 2$  \_\_\_\_\_  $m\angle 4$  \_\_\_\_\_  $m\angle 5$  \_\_\_\_\_



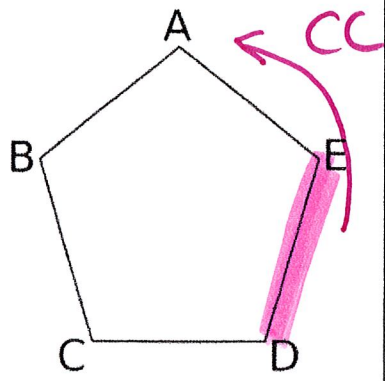
6. in problem #5, describe the angles:

$\angle 3$  and  $\angle 5$  \_\_\_\_\_

$\angle 1$  and  $\angle 2$  \_\_\_\_\_

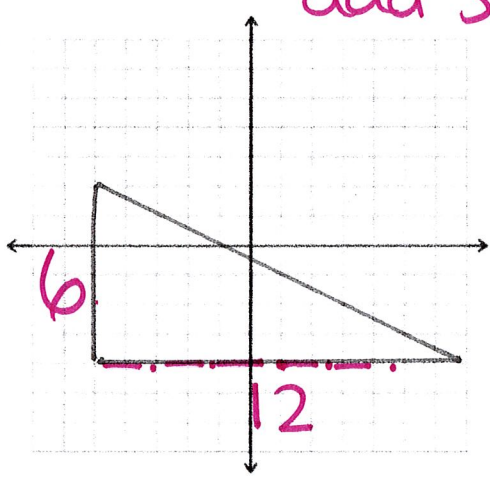
7. If you rotate the pentagon  $216^\circ$  counterclockwise, name the image of  $\overline{DE}$  \_\_\_\_\_

$\frac{360^\circ}{5 \text{ sides}}$

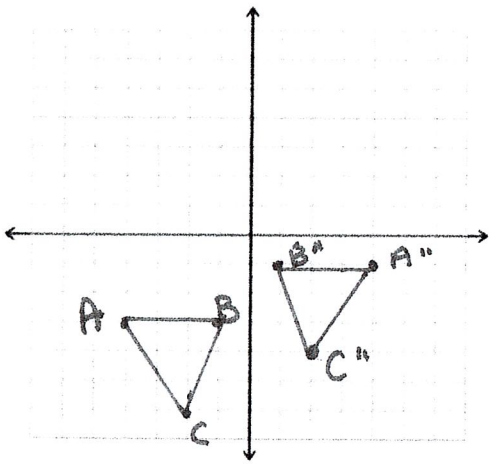


8. Find the perimeter of the triangle

add sides.



9.



10. Which series of rigid motions proves that  $\Delta ABC \cong \Delta A'B'C'$ ?

- A. reflect over  $y = x$ , then reflect over the x-axis
- B. reflect over  $x = -1$  then rotate  $180^\circ$
- C. Reflect over the line  $y = -1$ , then rotate  $180^\circ$
- D. Reflect over the x-axis, then rotate  $180^\circ$

11. \_\_\_\_\_ Which is NOT valid theorem proving  $\Delta ABC \cong \Delta A'B'C'$ ?

- A. SSS;  $\overline{AB}$  is taken to  $\overline{A'B'}$ ,  $\overline{AC}$  is taken to  $\overline{A'C'}$ ,  $\overline{BC}$  is taken to  $\overline{B'C'}$
- B. AAA;  $\angle A$  is taken to  $\angle A'$ ,  $\angle B$  is taken to  $\angle B'$ ,  $\angle C$  is taken to  $\angle C'$ ,
- C. AAS;  $\angle A$  is taken to  $\angle A'$ ,  $\angle B$  is taken to  $\angle B'$ ,  $\overline{BC}$  is taken to  $\overline{B'C'}$
- D. ASA;  $\angle A$  is taken to  $\angle A'$ ,  $\angle B$  is taken to  $\angle B'$ ,  $\overline{AB}$  is taken to  $\overline{A'B'}$

Diagram for 11

