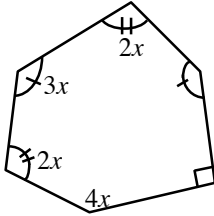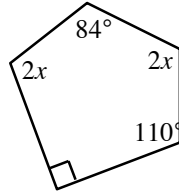Name: _____

Date: _____ Block: _____

Polygon Sum and Exterior Angle Sum Theorem

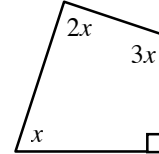Directions: For each polygon, solve for x and y.

1.

$2x$

$3x$

$2x$

$2x$

$4x$

2.

$84°$

$2x$

$2x$

$2x$

$110°$

3.

$2x$

$3x$

x

4.
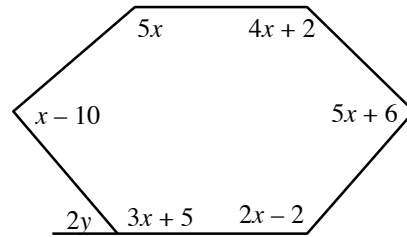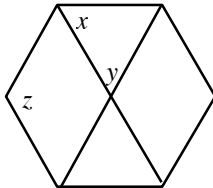
$4x$

$5x + 20$

$5x - 10$ $3x + 10$

5.

$5x$ $4x + 2$

$x - 10$ $5x + 6$

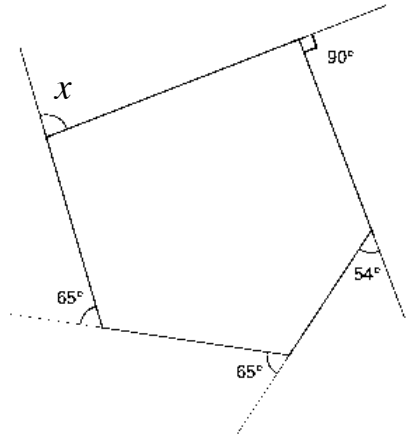$2y$ $3x + 5$ $2x - 2$
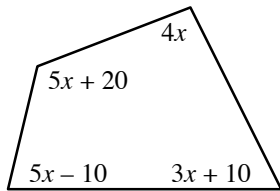
6. This is a regular hexagon
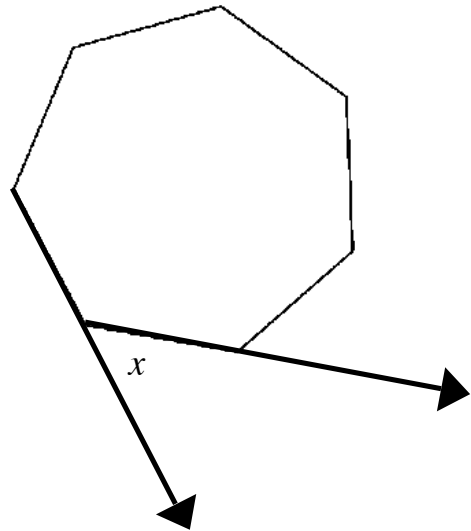
x

y

z

7. This is a regular pentagon

$2x - 1$
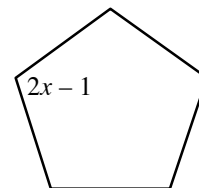
8.

9. This is a regular heptagon.

10. An exterior angle of an *n*-sided regular polygon has a measure of 60°. How many sides does the polygon have?