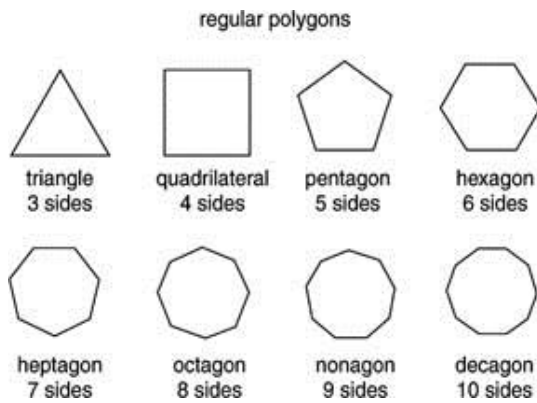# Math Tips: Plane (2D) Geometry

Key Terms:

- **Polygon:** Any flat (2D) shape with straight sides. Examples: triangle, rectangle
- **Regular Polygon**: A polygon with <u>all sides the same length</u> and <u>all angles the same size</u>.

regular polygons

triangle	quadrilateral	pentagon	hexagon
3 sides	4 sides	5 sides	6 sides

heptagon	octagon	nonagon	decagon
7 sides	8 sides	9 sides	10 sides

# Sides	Regular Polygon
3	Equilateral Triangle
4	Square
5	Pentagon
6	Hexagon
7	Heptagon
8	Octagon
9	Nonagon
10	Decagon

- **Area**: The space covered by a shape.
- **Perimeter**: The distance around the edge of a shape
- **Circumference**: The distance around the edge of a circle
- **Diameter**: The distance across the center of a circle
- **Radius:** The distance from the center of a circle to the edge (also ½ of diameter)
- **Pi:** The ratio of a circle's circumference to its diameter (approximately 3.14)

Handy Calculations (Grades 3-5)

For any shape: **Perimeter** = Sum of the length of all sides
For any rectangle: **Area** = Length x Width
For any circle: **Circumference** = Pi x Diameter (where Pi = 3.14)