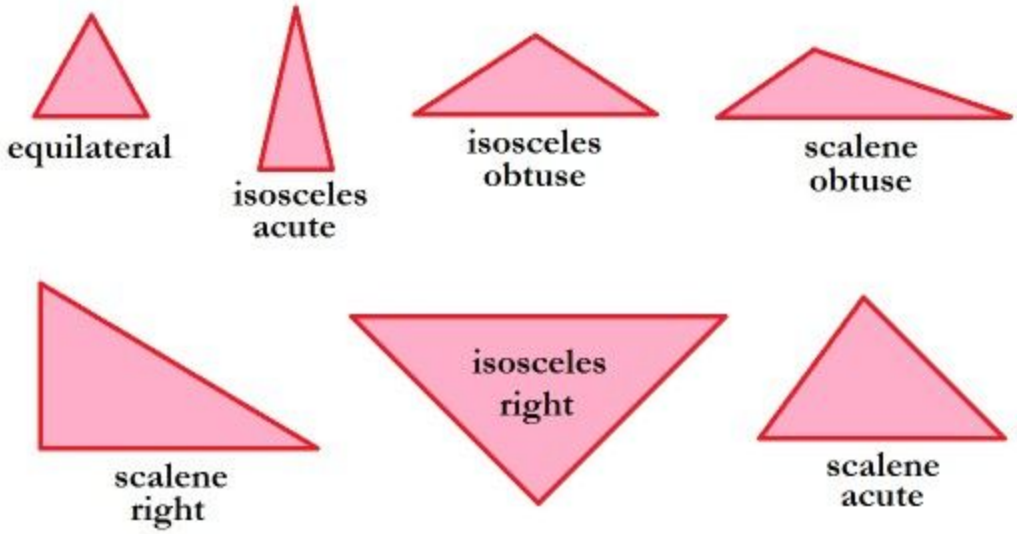
Polygons

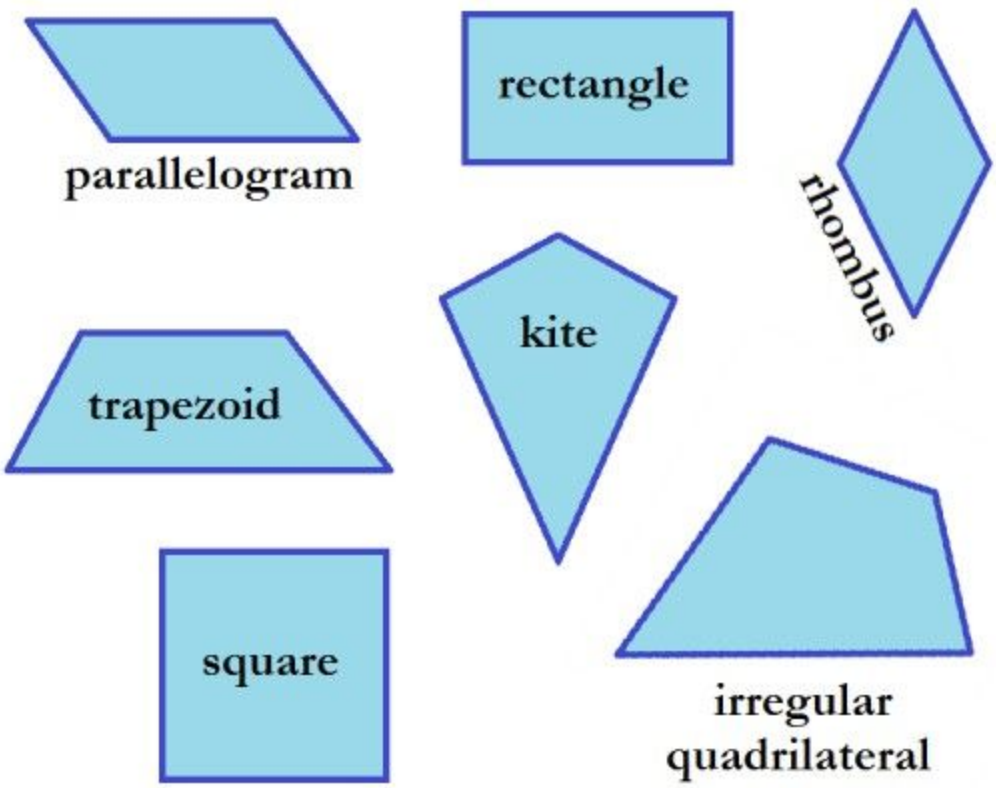


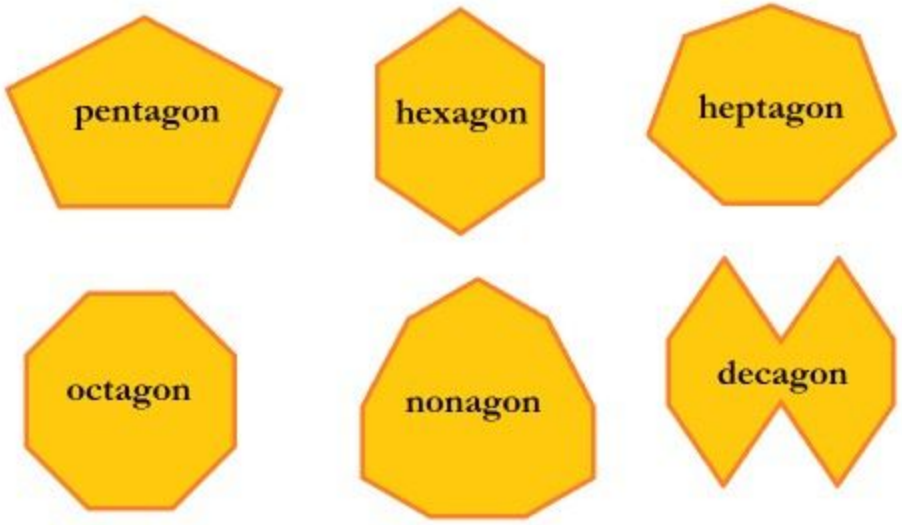
. **Triangle** A triangle is a three-sided figure. One property of triangles is that all three angles add up to 180 degrees. The longest side is opposite the largest angle, and the shortest side is opposite the smallest angle.

Seven types of triangles

- **Scalene Triangle** A scalene triangle has three sides of unequal length. All three angles are also unequal.
- **Isosceles Triangle** A triangle with two sides of equal length and a third side that is either longer or shorter than the other two. Because two sides are equal, the angles opposite these sides are also equal.
- **Equilateral Triangle** A triangle with three equal sides and three equal angles. Also called an equiangular triangle, each of the angles is 60 degrees.
- **Obtuse Triangle** A triangle that has one angle with a measure greater than 90 degrees, A.K.A. an obtuse angle. The other two angles are necessarily less than 90 degrees.
- **Right Triangle** A triangle with one angle that is exactly 90 degrees, A.K.A. a right angle. The other two angles add up to 90 degrees.
- **Acute Triangle** A triangle whose three angles are all less than 90 degrees, A.K.A. acute angles.

Polygons - Quadrilaterals (4-sided closed figures)





Pentagon, hexagon, heptagon, octagon, nonagon, and decagon.

Only the octagon is regular. All except the decagon are convex.

- **Quadrilateral** Any four-sided figure with straight edges.
- **Parallelogram** A four-sided figure that has two pairs of parallel sides. Opposite sides are equal in length, and opposite angles are equal as well.
- **Rectangle** A parallelogram with four right angles.
- **Rhombus** A parallelogram with four equal sides. See also, Rhombus Area Formula.
- **Trapezoid** A quadrilateral with one pair of parallel sides.
- **Kite** A quadrilateral with two pairs of sides that have equal length. The sides with equal length are adjacent to one another, rather than opposite as with a parallelogram.
- **Square** A rectangle that is also a rhombus. It has four equal sides and four equal angles that measure 90 degrees each.
- **Pentagon** A pentagon is a five-sided polygon. A regular pentagon has five equal sides and five equal angles.
- **Hexagon** A hexagon is a six-sided polygon. See also, Regular Hexagon Area Formula.
- **Heptagon** A heptagon is a seven-sided polygon.
- **Octagon** An octagon is an eight-sided polygon. A stop sign is in the shape of a regular octagon since it has eight equal sides and eight equal angles.
- **Nonagon** A nonagon is a nine-sided polygon.
- **Decagon** A decagon is a ten-sided polygon.
- **Hendecagon** Occasionally called an undecagon, this is a polygon with 11 sides.
- **Regular Polygon** A regular polygon is a polygon with equal side lengths and equal angles at the vertices.
- **Convex Polygon** For convex polygons, all vertex angles as measured from the interior are less than 180 degrees. Equivalently, all vertex angles measured from the exterior are greater than 180 degrees.