

Geometry Info Sheet #26

Special Quadrilaterals

Definitions

Polygon: A two-dimensional closed plane figure consisting of at least three straight line segments such that each segment intersects exactly two other segments; a polygon has no curves

Simple Quadrilateral: A four-sided polygon (not self-intersecting)

Complex Quadrilateral: A two-dimensional figure with four straight-line sides that is self-intersecting

Parallelogram: A quadrilateral with two pairs of parallel sides

Rhombus: A parallelogram with four congruent sides

Rectangle: A parallelogram with four right angles

Square: A parallelogram with four congruent sides and four right angles

Trapezoid: A quadrilateral with exactly one pair of parallel sides; note that some definitions state that a trapezoid has at least one pair of parallel sides; the two parallel sides are called **bases**, and the non-parallel opposite sides are the **legs** (or, if a trapezoid has two pairs of parallel sides, then there are two sets of bases); the **base angles** of a trapezoid are two adjacent angles whose shared side is a base; a typical trapezoid has two pairs of base angles

Isosceles Trapezoid: A trapezoid with congruent legs (non-parallel opposite sides)

Kite: A quadrilateral with two pairs of congruent adjacent sides and no congruent opposite sides