

Geometry Notes: Quadrilaterals

quadrilateral	<u>polygon that has four sides</u> All interior angles add up to 360°	
parallelogram	<u>quadrilateral that has two pairs of parallel sides</u> All interior angles add up to 360° Opposite sides are parallel Opposite sides are congruent Opposite angles are congruent Consecutive angles are supplementary Diagonals bisect each other	(all quadrilaterals)
rectangle	<u>a parallelogram that has all 90° interior angles</u> All interior angles add up to 360° Opposite sides are parallel Opposite sides are congruent Opposite angles are congruent Consecutive angles are supplementary Diagonals bisect each other All interior angles are 90° Diagonals are congruent Has two lines of symmetry [through midpoints of sides]	(all quadrilaterals) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms)
rhombus	<u>a parallelogram that has all equal sides</u> All interior angles add up to 360° Opposite sides are parallel Opposite sides are congruent Opposite angles are congruent Consecutive angles are supplementary Diagonals bisect each other All sides are congruent Diagonals intersect at 90° Diagonals bisect interior angles Has two lines of symmetry [along diagonals]	(all quadrilaterals) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms)
square	<u>a parallelogram that has all equal sides and all 90° interior angles</u> [has all properties of a rhombus and rectangle] All interior angles add up to 360° Opposite sides are parallel Opposite sides are congruent Opposite angles are congruent Consecutive angles are supplementary Diagonals bisect each other All sides are congruent Diagonals intersect at 90° All interior angles are 90° Diagonals are congruent Diagonals form 45° angles with vertices Has four lines of symmetry [along diagonals and through midpoints of sides]	(all quadrilaterals) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (all parallelograms) (rhombus) (rhombus) (rectangle) (rectangle)
kite	<u>a quadrilateral that has two pairs of adjacent congruent sides</u> All interior angles add up to 360° Diagonals intersect at 90° Has one line of symmetry along one of its diagonals	(all quadrilaterals) (kite) (kite)
trapezoid	<u>a quadrilateral that has one pair of parallel sides</u> All interior angles add up to 360° One pair of sides are parallel The interior angles formed along the non-parallel sides are supplementary [consecutive interior angles]	(all quadrilaterals) (trapezoid)