Summary Sheet Quadrilateral Properties
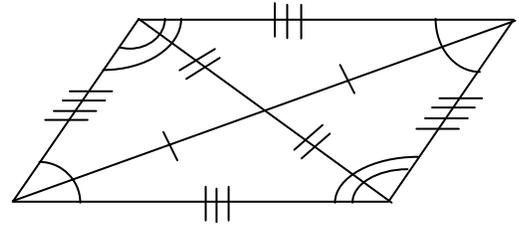
PARALLELOGRAMS (rectangles, squares, and rhombi):

1) Opposite sides of a parallelogram are congruent.
2) Opposite angles of a parallelogram are congruent.
3) Consecutive angles in a parallelogram are supplementary.
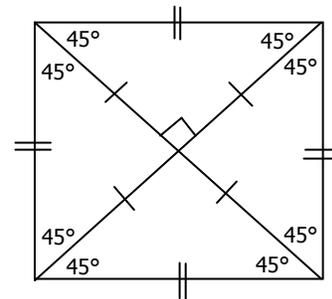4) The diagonals of a parallelogram bisect each other.

RECTANGLES:

1) Opposite sides are congruent (they equal each other).
2) Opposite angles are congruent (they equal each other).
3) Consecutive angles are supplementary (they add up to 180).
4) Diagonals bisect each other (the parts are equal).
5) Diagonals are congruent (they equal each other).
6) All four corner angles are 90°.
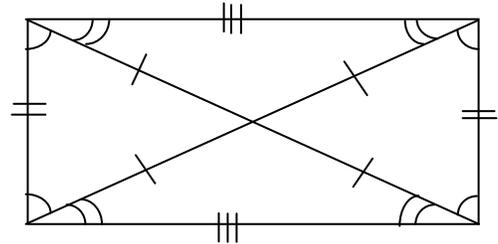
SQUARES:

1) Opposite sides are congruent (they equal each other).
2) Opposite angles are congruent (they equal each other).
3) Consecutive angles are supplementary (they add up to 180).
4) Diagonals bisect each other (the parts are equal).
5) Diagonals are congruent (they equal each other).
6) All four corner angles are 90°.
7) Diagonals perpendicular (the form right angles in the middle).
8) Diagonals bisect angles (the angles equal to each other).

RHOMBI:

1) Opposite sides are congruent (they equal each other).
2) Opposite angles are congruent (they equal each other).
3) Consecutive angles are supplementary (they add up to 180).
4) Diagonals bisect each other (the parts are equal).
5) Diagonals perpendicular (the form right angles in the middle).
6) Diagonals bisect angles (the angles are equal to each other).
7) All four sides are congruent.
8) The diagonals are NOT congruent.
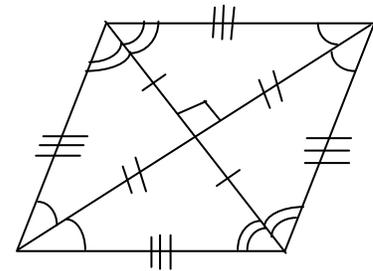
ISOSCELES TRAPEZOIDS:

Median = ½ (base + base)

1) Lower two base angles are congruent (they equal each other).
2) Upper two base angles are congruent (they equal each other).
3) The diagonals are congruent (they equal each other).
4) opposite angles are supplementary (they add up to 180).
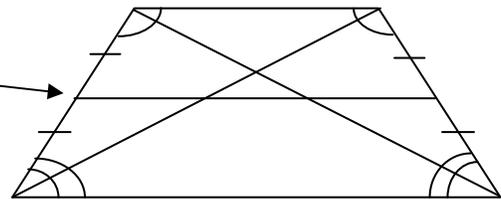
Kite

1) Two pairs of consecutive sides congruent, but opposite sides not congruent
2) Diagonals perpendicular.
3) Exactly one pair of angles congruent.
4) One pair of angles bisected.
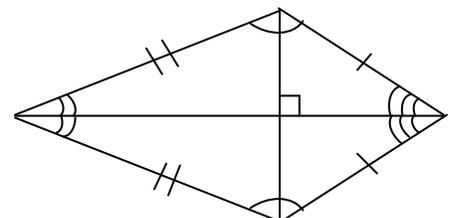
SUMMARY CHARTS:

Special Quadrilateral	Diagonals		Diagonals Bisect	
	Congruent	Perpendicular	Each Other	Angles
Parallelogram	**Sometimes**	**Sometimes**	**Always**	**Sometimes**
Rectangle	**Always**	**Sometimes**	**Always**	**Sometimes**
Rhombus	**Sometimes**	**Always**	**Always**	**Always**
Square	**Always**	**Always**	**Always**	**Always**
Trapezoid	**Sometimes**	**Never**	**Never**	**Never**
Isosceles Trapezoid	**Always**	**Never**	**Never**	**Never**
Kite	**Never**	**Always**	**Only one diagonal**	**Only one angle**

Property	Rectangle	Rhombus	Square
1. **All the properties of a parallelogram?**	**Yes**	**Yes**	**Yes**
2. **Equiangular (4 right corner angles?)**	**Yes**	**No**	**Yes**
3. **Equilateral (4 congruent sides?)**	**No**	**Yes**	**Yes**
4. **Diagonals bisect angles?**	**No**	**Yes**	**Yes**
5. **Diagonals congruent?**	**Yes**	**No**	**Yes**
6. **Diagonals perpendicular?**	**No**	**Yes**	**Yes**