Special Quadrilaterals

Parallelogram:  A quadrilateral with 2 sets of parallel sides

* Opposite sides are parallel
* Opposite angles are \( \cong \)
* Diagonals bisect each other

* Opposite sides are \( \cong \)
* Same-side interior angles are supplementary
  \[ x + y = 180 \]
  \[ x + w = 180 \]
* Diagonals create \( \cong \) alternate interior angles

Rectangle:  A quadrilateral with four right angles

Properties:
1. All angles are right
2. Diagonals are \( \cong \)

Rhombus:  A quadrilateral with four congruent sides

Properties:
1. All sides are \( \cong \)
2. Diagonals are \( \perp \)
3. Diagonals bisect opposite angles

Square:  A quadrilateral with four congruent sides and angles

Properties
1. All sides and angles are \( \cong \)
2. EVERYTHING ELSE ON THIS SHEET

* All rectangles are parallelograms
* All rhombuses are parallelograms
* All squares are rectangles, rhombuses, and parallelograms