

Quadrilateral Cheat Sheet

Parallelogram

- Opposite sides are parallel and congruent
- Opposite angles are congruent
- Adjacent angles are supplementary
- Diagonals bisect each other

Rhombus

- Parallelogram with four congruent sides
- Diagonals are perpendicular
- The diagonals bisect the angles at the vertices

Rectangle

- Parallelogram with four right angles
- Diagonals are congruent

Square

- Parallelogram, Rhombus and Rectangle
- Exactly one pair of opposite sides are parallel

Trapezoid

- Same-side interior angles are supplementary

Isosceles Trapezoid

- Trapezoid with non-parallel opposite sides congruent
- Base angles are congruent
- Diagonals are congruent

Kite

- No pairs of parallel sides
- Two pairs of adjacent sides are congruent
- Diagonals are perpendicular
- Angles formed by non-congruent sides are congruent
- Angles formed by adjacent congruent sides are bisected by a diagonal.
- Diagonal through the congruent vertex angles is bisected by the other diagonal

5 ways to prove that a quadrilateral is a parallelogram:

1. The diagonals of the quadrilateral bisect each other.
2. One pair of opposite sides of the quadrilateral is both congruent and parallel.
3. Both pairs of opposite sides of the quadrilateral are parallel.
4. Both pairs of opposite sides of the quadrilateral are congruent.
5. Both pairs of opposite angles of the quadrilateral are congruent.