Proving that Figures are Special Quadrilaterals

To prove that a quadrilateral is one of the special quadrilaterals, follow the sequence of the given steps.

**Methods for proving quadrilaterals are parallelograms:**

1. Show 2 pairs of opp. sides ≅ 🡪 parallelogram
2. Show opp. sides || 🡪 parallelogram
3. Show opp. ∠s ≅ 🡪 parallelogram
4. Show diagonals bisect each other 🡪 parallelogram
5. Show 1 pair of opp. sides both ≅ and || 🡪 parallelogram

**Methods for proving quadrilaterals are rectangles:**

1. Show parallelogram 🡪 show 1 right ∠ 🡪 rectangle
2. Show parallelogram 🡪 show diagonals ≅ 🡪 rectangle
3. Show 4 right ∠s 🡪 rectangle

**Methods for proving quadrilaterals are kites:**

1. Show 2 pairs of disjoint sides ≅ 🡪 kite
2. Show 1 diagonal is ⊥ bisector of the other 🡪 kite

**Methods for proving quadrilaterals are rhombuses:**

1. Show parallelogram 🡪 show 1 pair of consecutive sides ≅ 🡪 rhombus
2. Show parallelogram 🡪 show either diagonal bisects 1 pair of opp. ∠s 🡪 rhombus
3. Show diagonals are ⊥ bisectors of each other 🡪 rhombus

**Method for proving quadrilaterals are squares:**

1. Show parallelogram 🡪 show rectangle or rhombus 🡪 square

**Methods for proving quadrilaterals are isosceles trapezoids:**

(To prove that a quadrilateral is a trapezoid, you must prove that one pair of opp. sides are parallel.)

1. Show trapezoid 🡪 show non-parallel sides are ≅ 🡪 isosc. trapezoid
2. Show trapezoid 🡪 Show lower or upper base ∠s ≅ 🡪 isosc. trapezoid
3. Show trapezoid 🡪 show diagonals are ≅ 🡪 isosc. trapezoid