# Quadrilaterals

Key

## Parallelograms: (6 prop)

1) both pairs of opp sides are ∥
2) both pairs of opp sides are ≅
3) both pairs of opp ∡'s are ≅
4) consecutive ∡'s are supp
5) diagonals bisect each other
*6) one pair of sides are ≅ and ∥ → □

## Kites:

1) 2 pairs of consecutive sides ≅
2) one pair of opp ∡'s ≅
3) diagonals are ⊥
4) 1 diagonal is ⊥ bisector of the other
5) 1 diagonal bisects a pair of opp ∡'s

(5 prop)

## Trapezoids:

1) exactly one pair of ∥ sides

(1 prop)

## Rectangles:

1) All ∡'s are rt ∡'s
2) Diagonals are ≅

(8 prop) ⊛ 4 isos Δ's

## Rhombuses:

1) All sides are ≅
⊛ 4 ≅ right Δ's
2) Diagonals are ⊥ bisectors of each other
3) Diagonals bisect ∡'s

(9 prop)

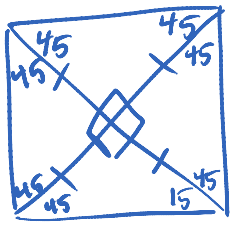
## Isosceles Trapezoids:

1) legs are ≅
2) lower base ∡'s ≅
3) upper base ∡'s ≅
4) lower and upper base ∡'s are supp
5) Diagonals are ≅

(6 prop)

## Square

(11 prop)




* Blue may help w/ algebra problems *

## How are the figures related?

Always ↑

Sometimes ↓

Never no connection

# *Always? Sometimes? Never?*

1. Diagonals of a parallelogram are perpendicular. (rhombus/square) ___S___
2. A rhombus is a parallelogram. ___A___
3. A parallelogram is a trapezoid. ___N___
4. Consecutive sides of a rectangle are congruent. (square) ___S___
5. Opposite angles of a trapezoid are congruent. ___N___
6. Diagonals of a square are perpendicular. (prop of square) ___A___
7. A rectangle is a quadrilateral. ___A___
8. A rhombus is a square. ___S___
9. Diagonals of a parallelogram are congruent. (rect/square) ___S___
10. Consecutive angles of a parallelogram are congruent. (rect/square) ___S___
11. Diagonals of a trapezoid are congruent. (isos trap) ___S___
12. Opposite sides of a rectangle are congruent. (prop of rect) ___A___
13. Base angles of a trapezoid are congruent. (isos trap) ___S___
14. Base angles of an isosceles trapezoid are congruent. (prop of isos trap) ___A___
15. Opposite angles of a rectangle are supplementary and congruent. opp ∠'s are 90° → ≅ and supp ___A___
16. Diagonals of a parallelogram bisect each other. (prop of ▱) ___A___
17. Diagonals of a kite are perpendicular. (prop of kite) ___A___
18. Square is a quadrilateral. ___A___