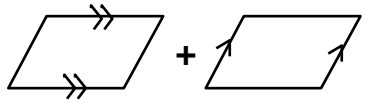
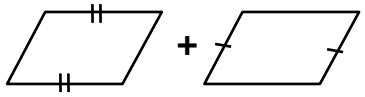
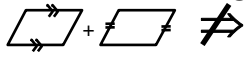
Prove: Parallelogram

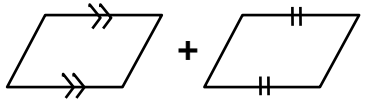
1. If both pairs of opposite sides of a quadrilateral are parallel, then it's a ||-ogram



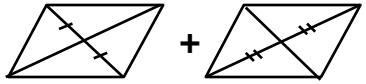
2. If both pairs of opposite sides of a quadrilateral are congruent, then it's a ||-ogram



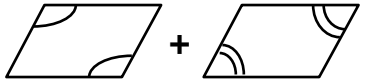
3. If one pair of opposite sides of a quadrilateral is both parallel and congruent, then it's a ||-ogram.
(Note:  ||-ogram)



4. If the diagonals of a quadrilateral bisect each other, then it's a ||-ogram.



5. If both pairs of opposite angles of a quadrilateral are congruent, then it's a ||-ogram



Prove: Rectangle

1. ⇒ Rectangle

If all four ∠'s of a quadrilateral are right ∠'s, then it is a rectanlge

2. parallelogram + ⇒ Rectangle

If a parallelogram has at least one right ∠, then it is a rectanlge

3. parallelogram + ⇒ Rectangle

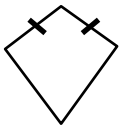
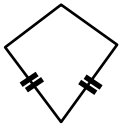
If a parallelogram has congruent diagonals, then it is a rectanlge

Prove: Square

Rectangle + **Rhombus** ⇒ Square

If a quadrilateral is both a rectangle and a rhombus, then it is a square

Prove: Kite

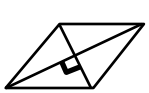
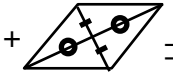
1.  +  ⇒ Kite

If a quadrilateral has two disjoint pairs of consecutive sides congruent, then it is a kite

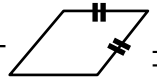
2. + ⇒ Kite

If a quadrilateral has one diagonal that is the ⊥ bisector of the other, then it is a kite

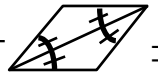
Prove: Rhombus

1.  +  ⇒ Rhombus

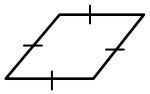
If the diaqonals of a quad are ⊥ bisectors of each other, then it is a rhombus

2 . ||-gram +  ⇒ Rhombus

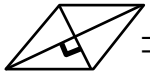
If a <u>parallelogram</u> has a pair of consecutive sides congruent, then it is a rhombus

3. ||-gram +  ⇒ Rhombus

If a <u>parallelogram</u> has a diagonal that bisects two of its angles, then it is a rhombus

4.  ⇒ Rhombus

If a quadrilateral has 4 congruent sides, then it is a rhombus

5. ||-gram +  ⇒ Rhombus

If a <u>parallelogram</u> has perpendicular diagonals,, then it is a rhombus

Prove: Isosceles Trapezoid

1 . **Trapezoid** + ⇒ Isosceles Trapezoid

If a trapezoid has congruent non-parallel sides, then it is an isosceles trapezoid

2 . **Trapezoid** + or ⇒ Isosceles Trapezoid

If a trapezoid has congruent upper or lower base angles, then it is an isosceles trapezoid

3 . **Trapezoid** + ⇒ Isosceles Trapezoid

If a trapezoid has congruent diagonals, then it is an isosceles trapezoid