

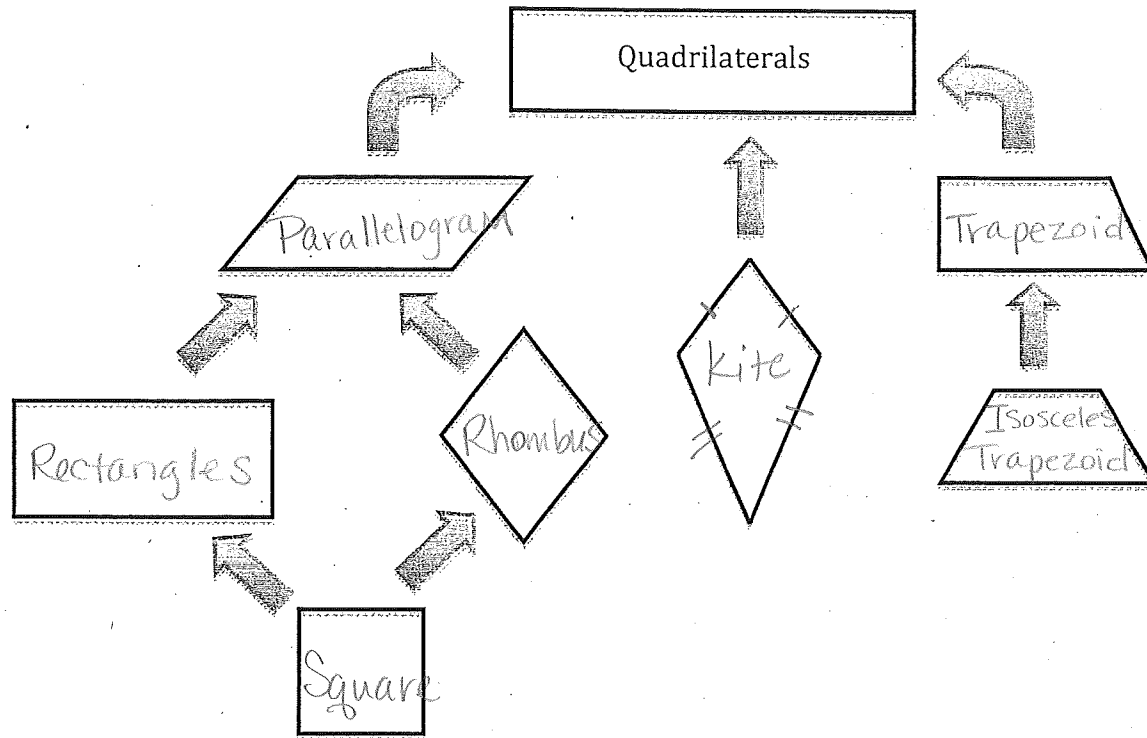
Name MRS. FERRINGTON Hour \_\_\_\_\_

Int. Geometry

Ferrington

## Chapter 6 Notes - Quadrilaterals

### HIERARCHY OF POLYGONS



<u>Features of Quadrilaterals</u>	Parallelogram	Rectangle	Rhombus	Square
Both pairs of opposite sides are parallel.	✓	✓	✓	✓
Opposite sides are congruent.	✓	✓	✓	✓
Opposite angles are congruent.	✓	✓	✓	✓
Consecutive angles are supplementary.	✓	✓	✓	✓
Diagonals bisect each other.	✓	✓	✓	✓
All angles are right angles.		✓		✓
Diagonals are congruent.		✓		✓
All sides are congruent.			✓	✓
Diagonals are perpendicular.			✓	✓
Each diagonal bisects a pair of opposite angles.			✓	✓

## Parallelograms

- both pairs of opp. sides are  $\parallel$ .
- Opp. Sides of  $\square$  are  $\cong$ .
- Opp.  $\angle$ s are  $\cong$ .
- Cons.  $\angle$ s in  $\square$  are supplementary
- If  $\square$  has 1 right  $\angle$ , then it has 4 rt.  $\angle$ s.
- Diagonals of  $\square$  bisect each other
- Diagonals separate  $\square$  into 2  $\cong \triangle$ s.

## Rectangles

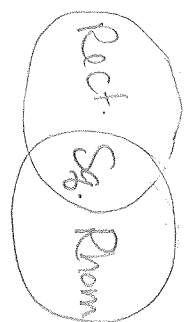
- A rectangle is a special type of parallelogram, therefore it has all of the properties of a  $\square$  with two additions:
- All 4  $\angle$ s are rt.  $\angle$ s
  - Diagonals are  $\cong$ .

## Rhombus

- A rhombus is a  $\square$  w/ all 4 sides  $\cong$ . All of the properties of  $\square$  can be applied with these additions:
- All 4 sides are  $\cong$ .
  - Diagonals are  $\perp$ .
  - Each diagonal bisects the pair of opp.  $\angle$ s.

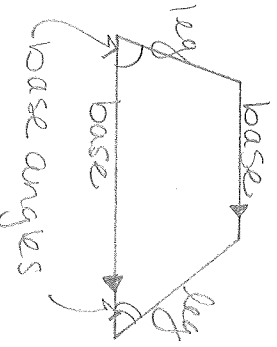
## Square

A square is both a rhombus & a rectangle.



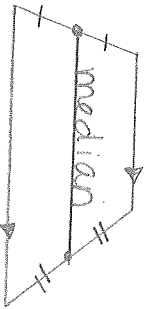
## Trapezoids

A quadrilateral with exactly one pair of parallel sides. The non-parallel sides are called legs. There are two pairs of base  $\angle$ s formed by one base and the legs.



## Isosceles Trapezoid

- The legs are  $\cong$ .
- The base  $\angle$ s are  $\cong$ .
- Diagonals are  $\cong$ .



length of the median is one-half the sum of the bases.

