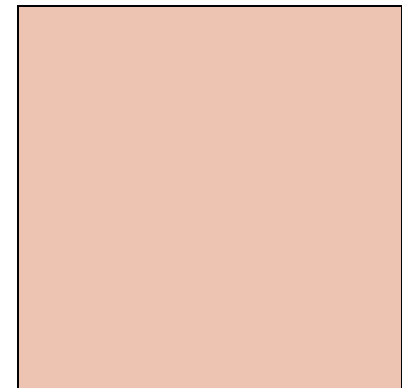
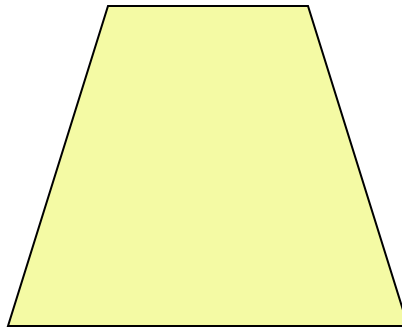
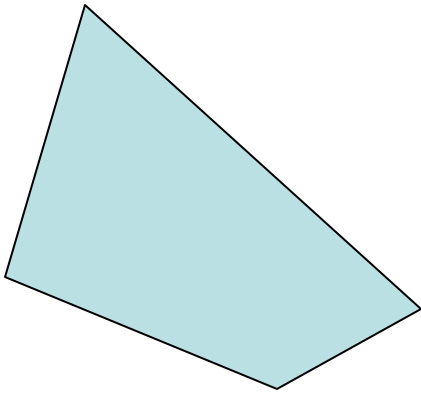


# Quadrilaterals

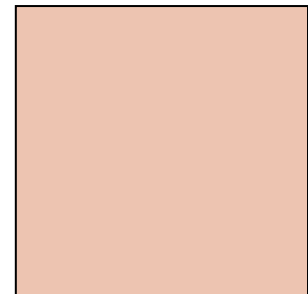
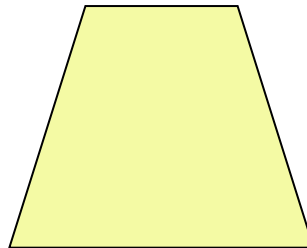
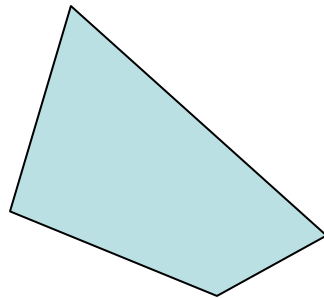
# Quadrilateral

- a quadrilateral is a polygon with 4 sides.



# Specific Quadrilaterals

- There are several specific types of quadrilaterals. They are classified based on their sides or angles.



# Quadrilaterals

Trapezoids

Isosceles  
Trapezoids

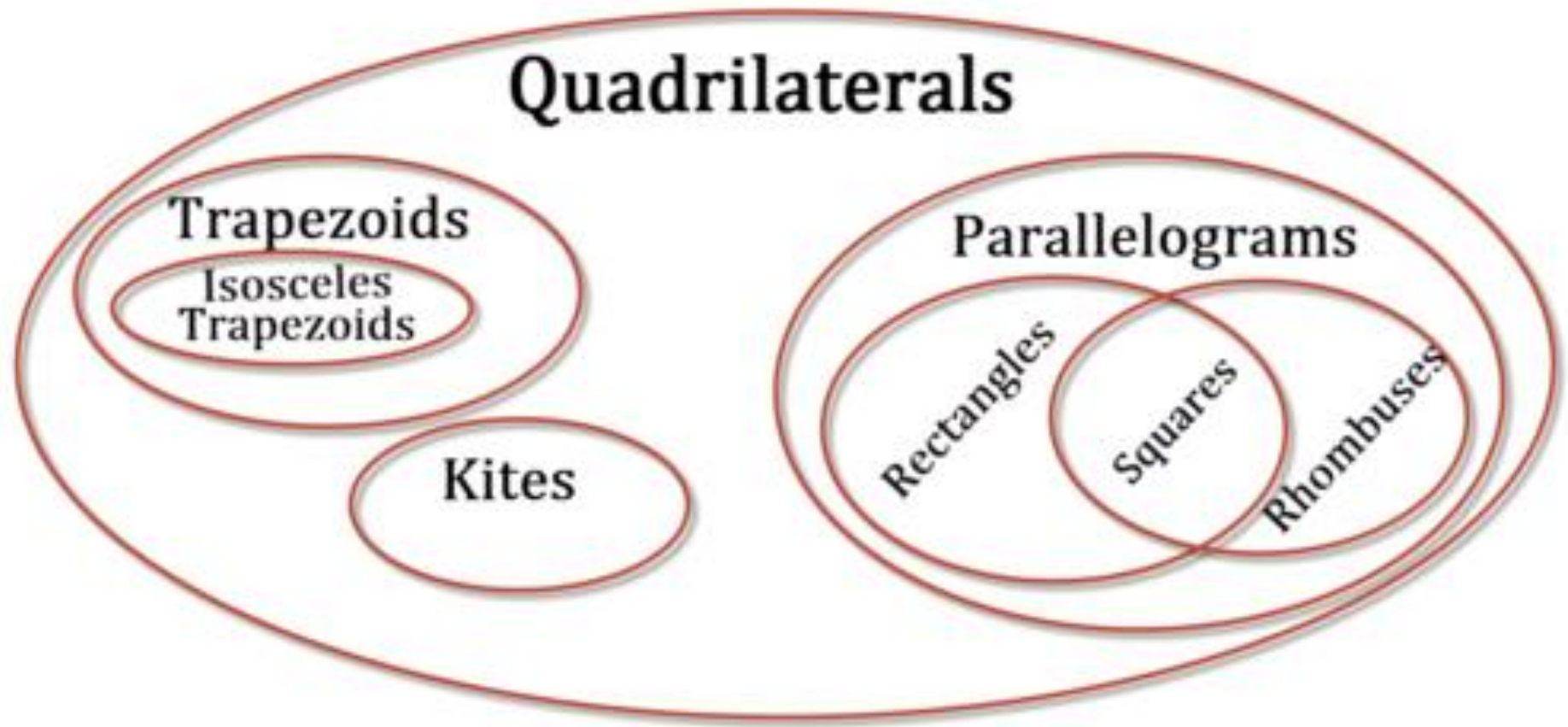
Kites

Parallelograms

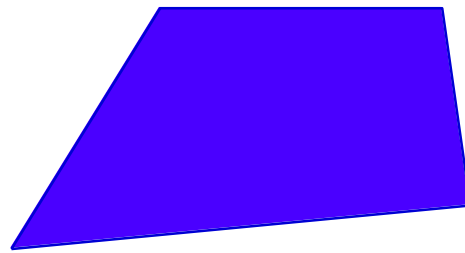
Rectangles

Squares

Rhombuses

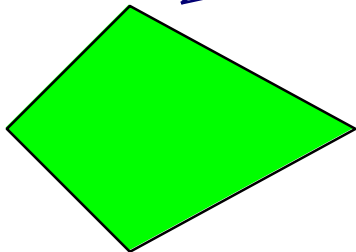


# The Hierarchy



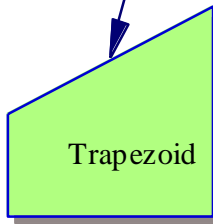
Quadrilaterals

2 pairs adjacent  
congruent sides



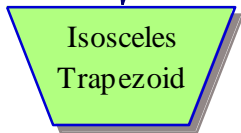
Kite

1 pair parallel sides



Trapezoid

non-parallel sides  
are congruent



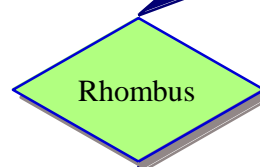
Isosceles  
Trapezoid

2 pairs parallel  
sides



Parallelogram

4 congruent sides



Rhombus

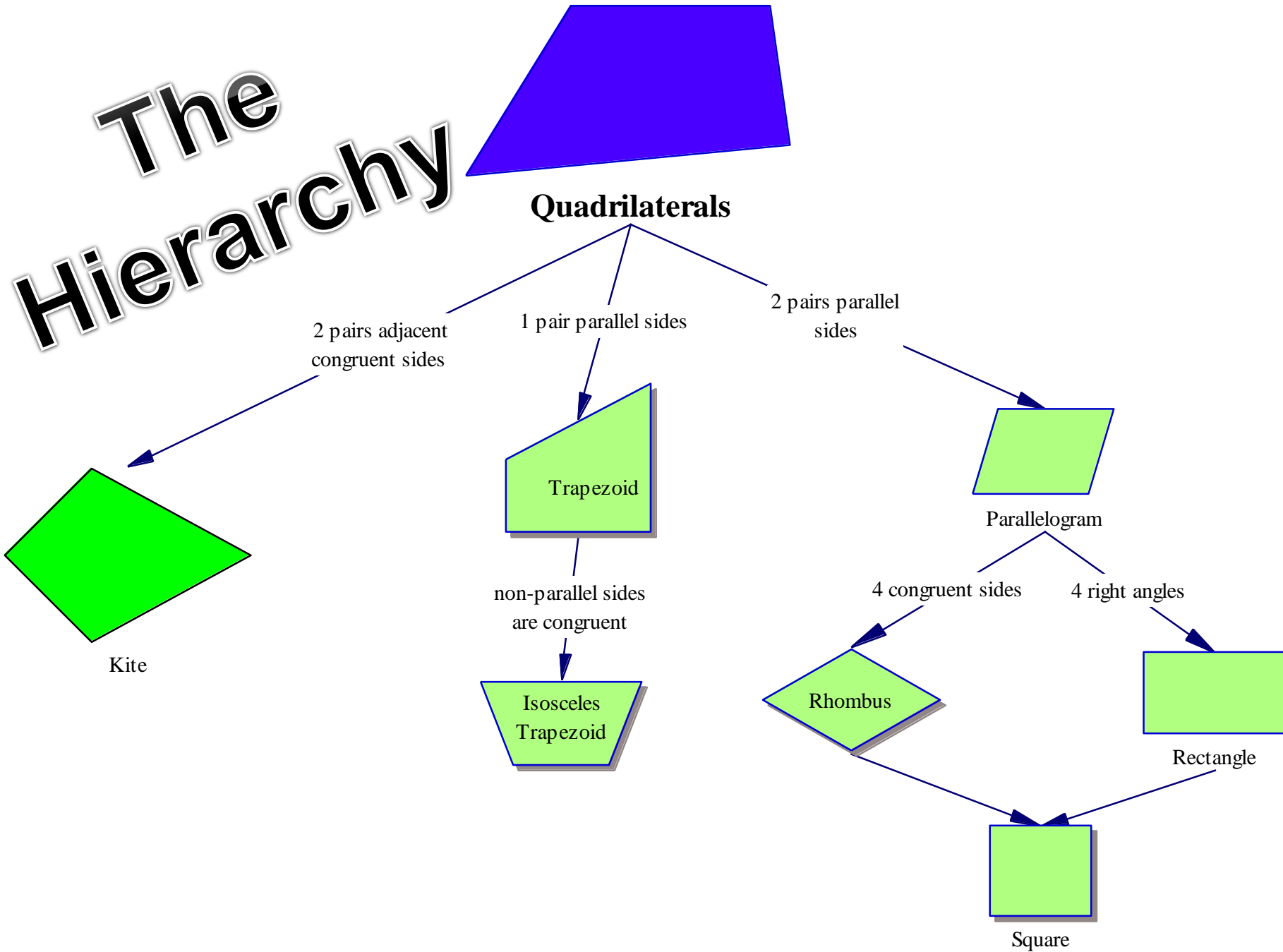
4 right angles

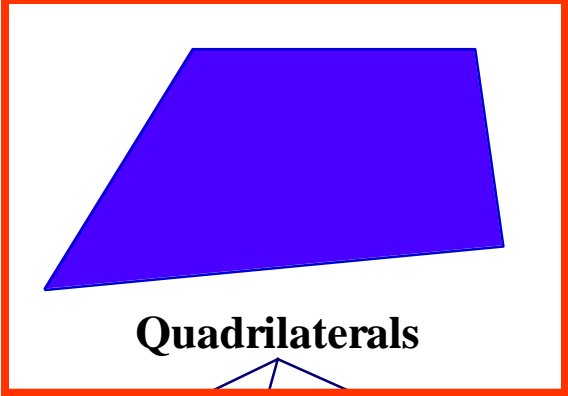


Rectangle



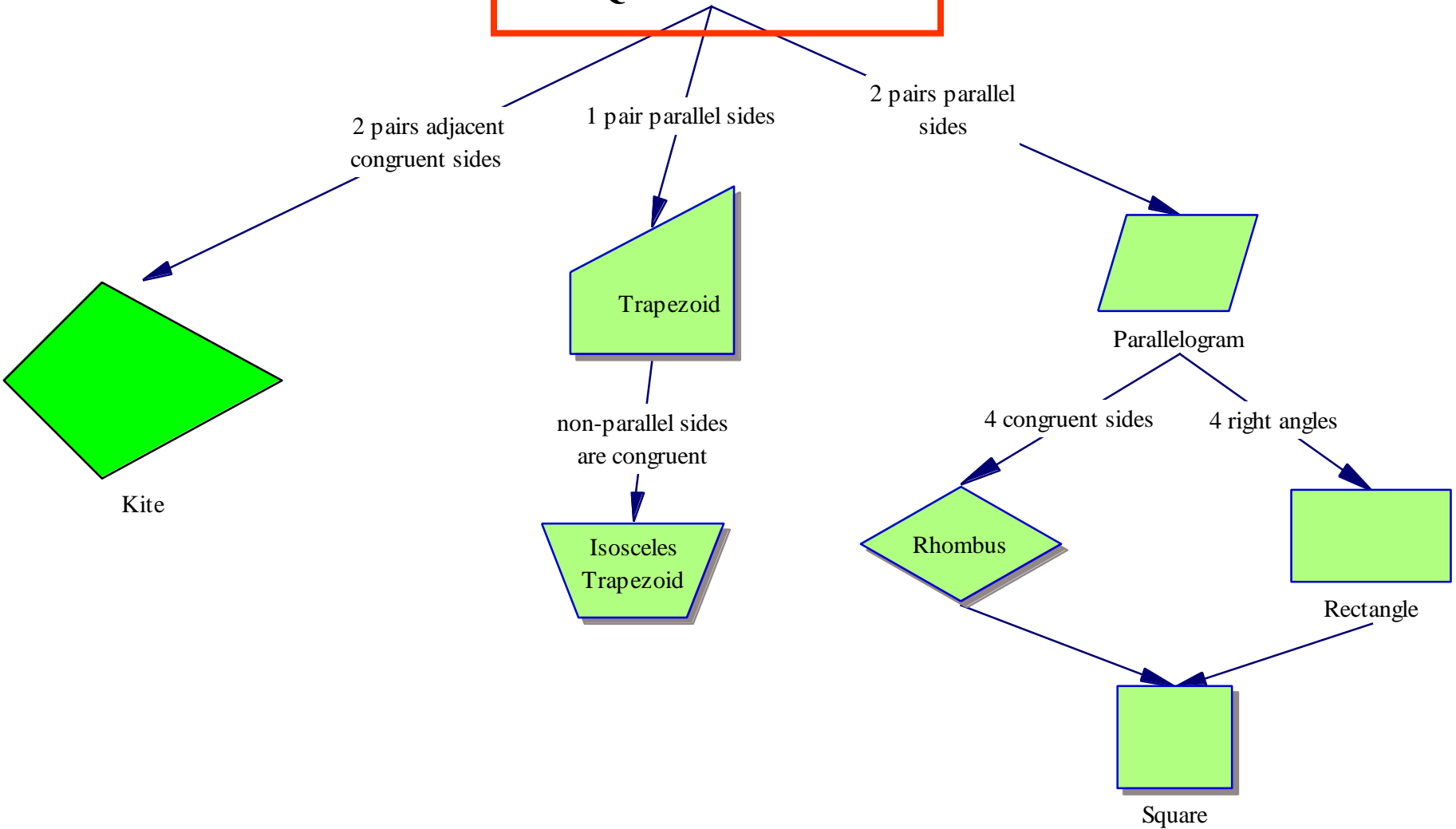
Square



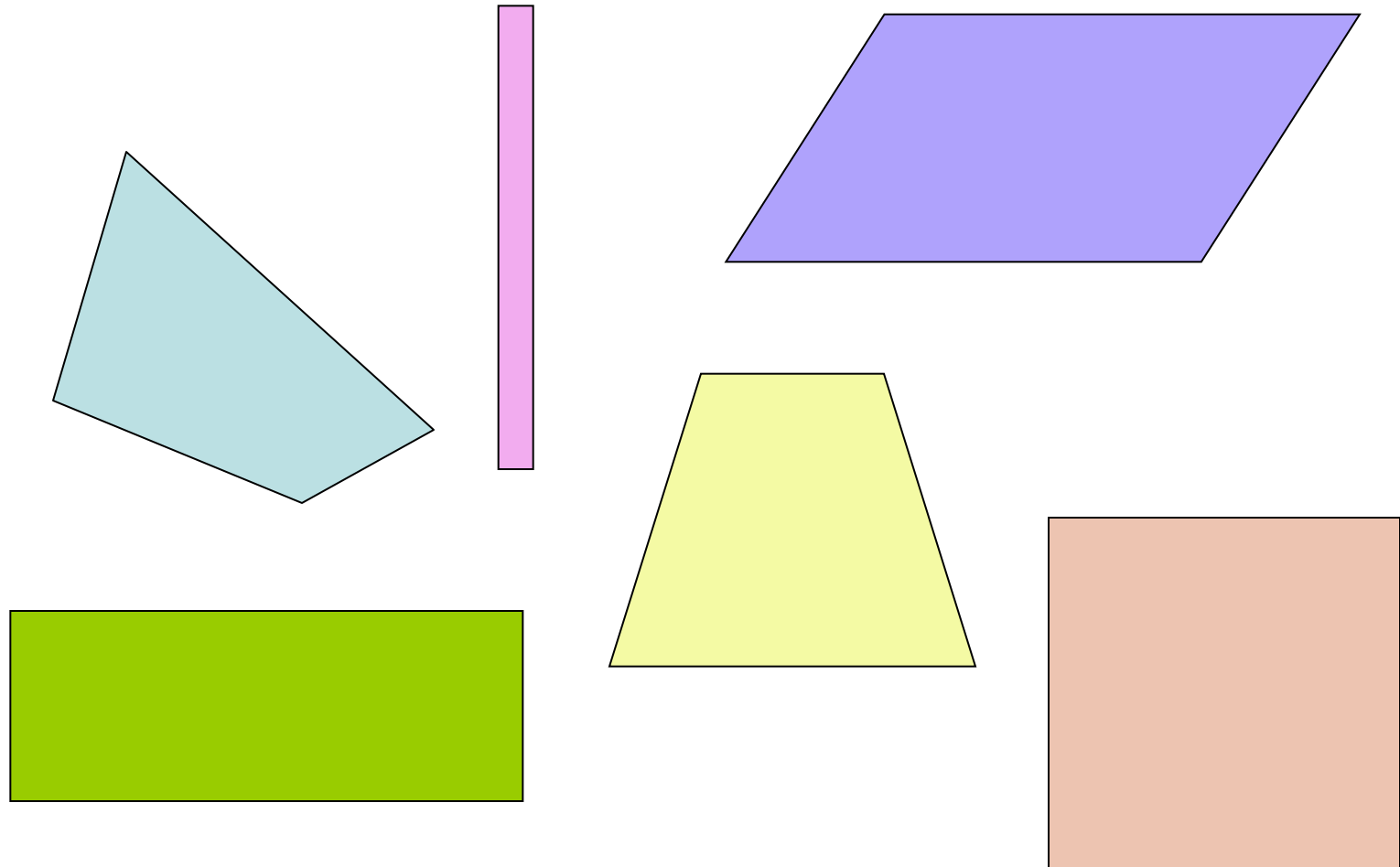


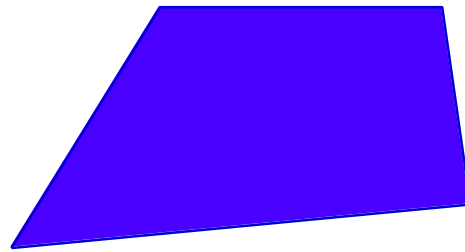
# Quadrilaterals

**A quadrilateral simply has 4 sides – no other special requirements.**



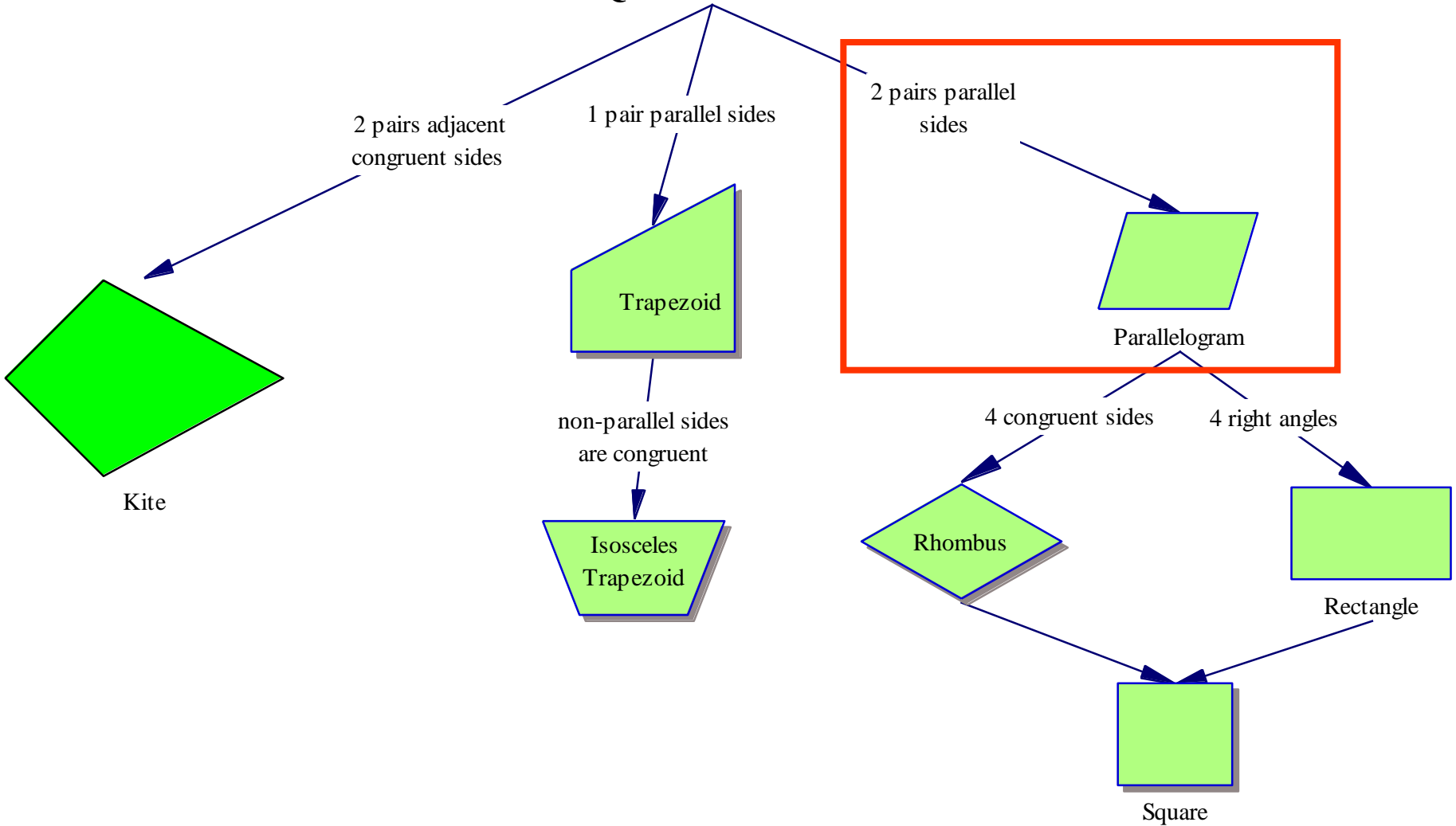
# Examples of Quadrilaterals





**A parallelogram has two pairs of parallel sides.**

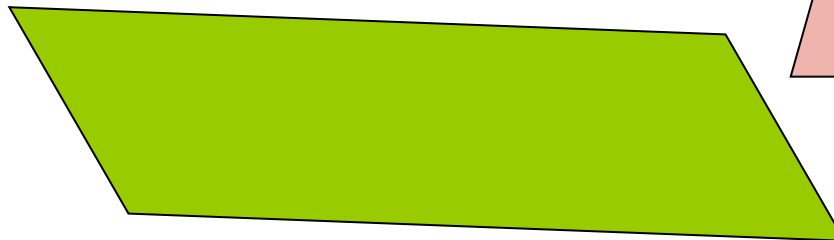
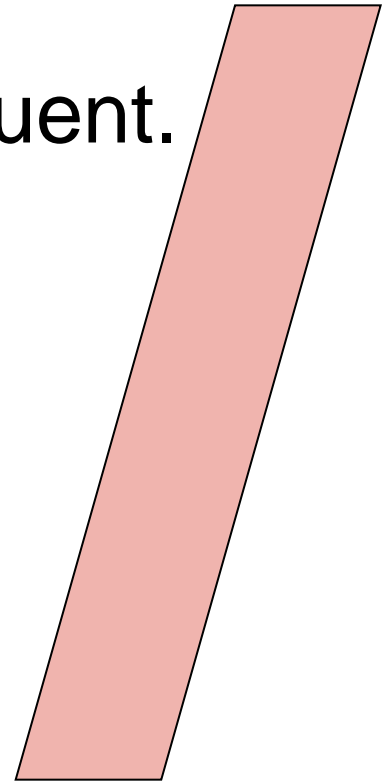
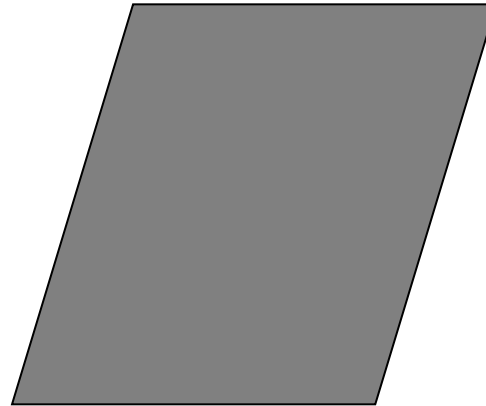
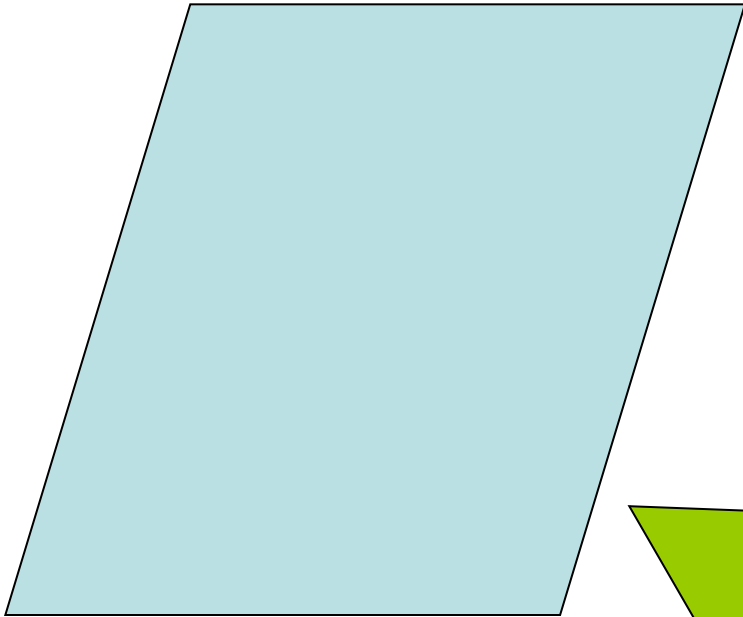
### Quadrilaterals

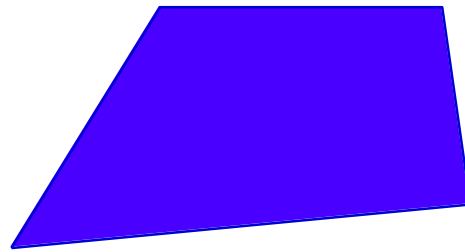




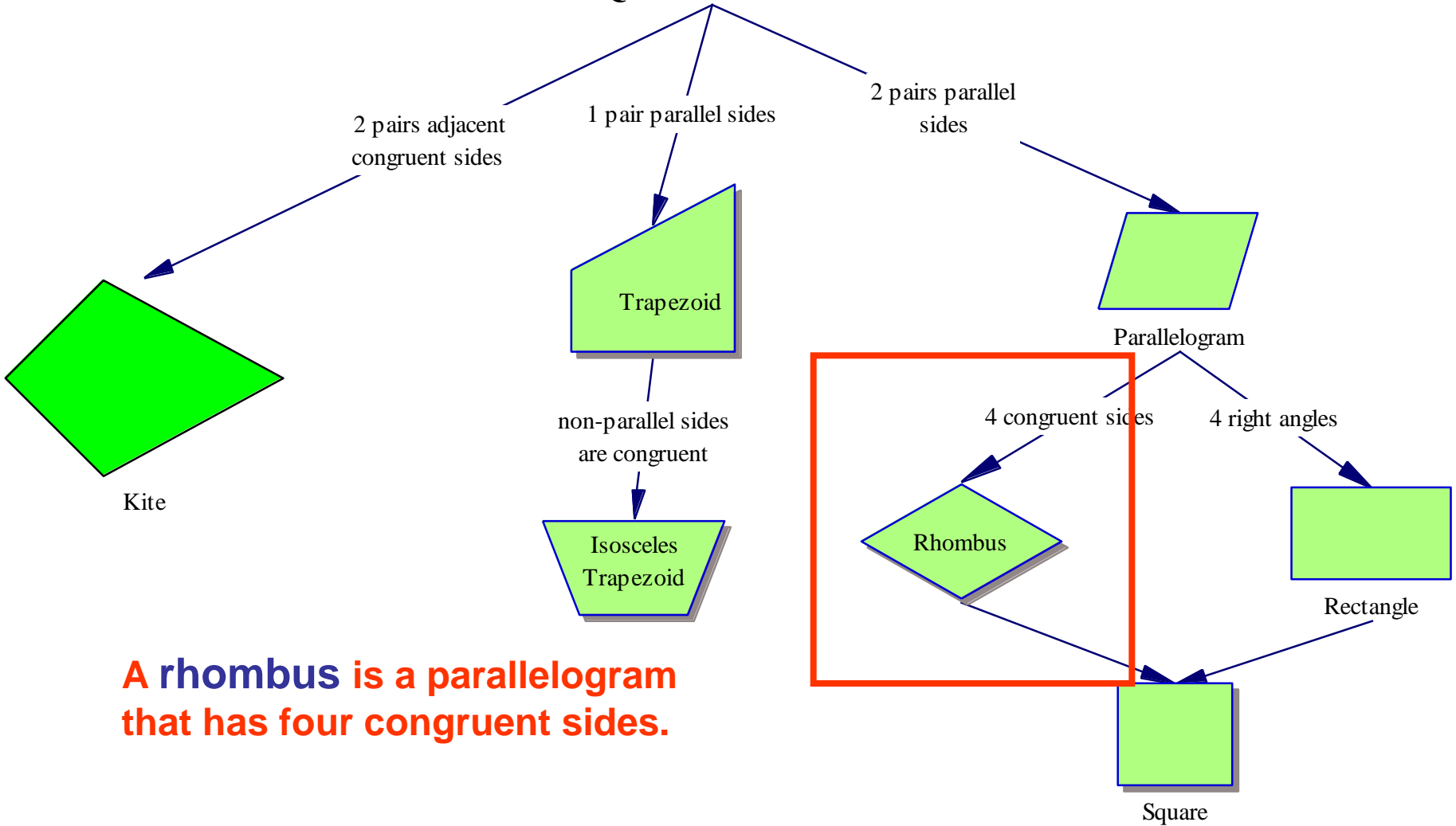
# Parallelogram

- Two pairs of parallel sides
- opposite sides are actually congruent.





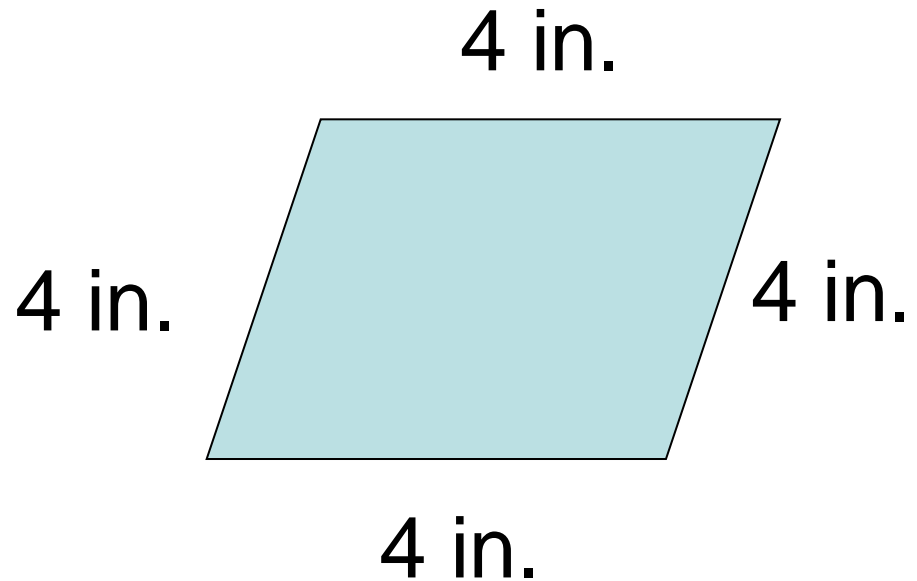
# Quadrilaterals

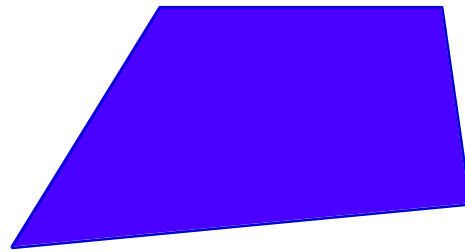


**A rhombus is a parallelogram that has four congruent sides.**

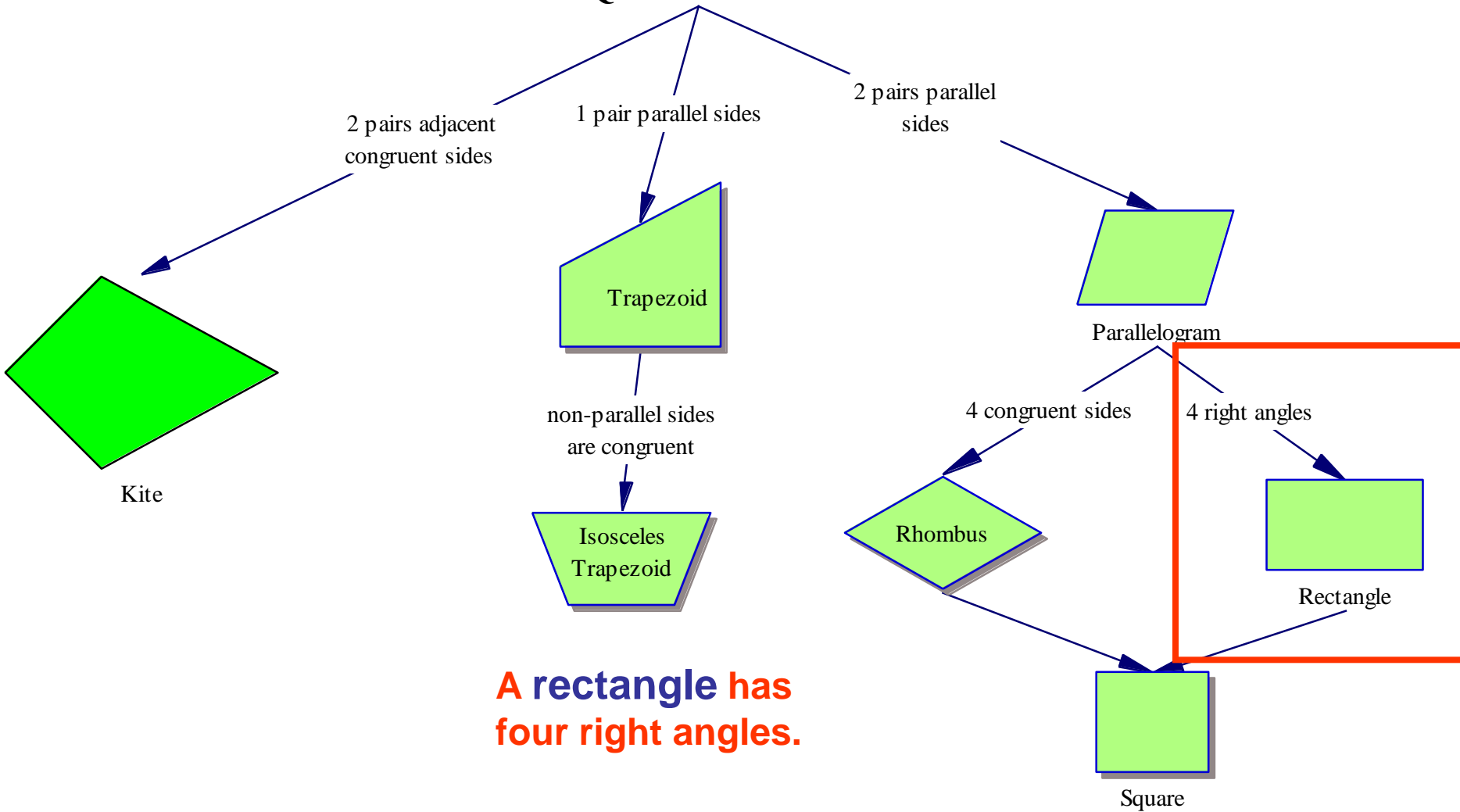
# Rhombus

- Still has two pairs of parallel sides;
- ALL sides congruent.





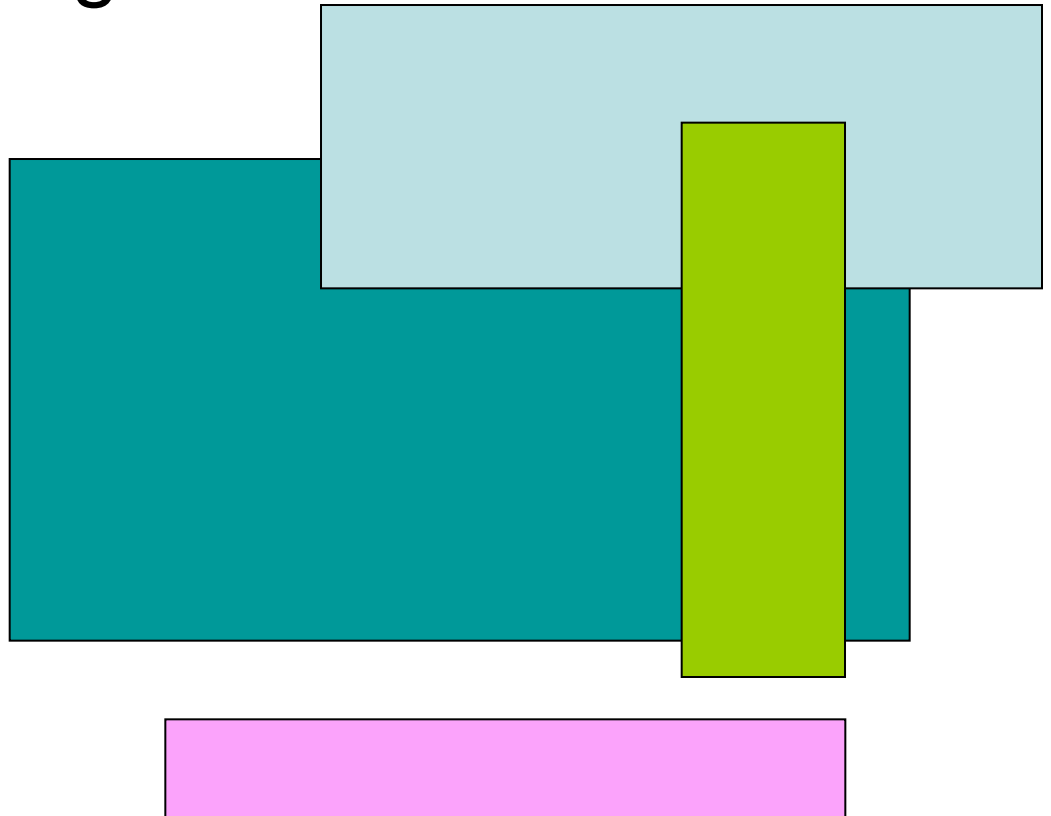
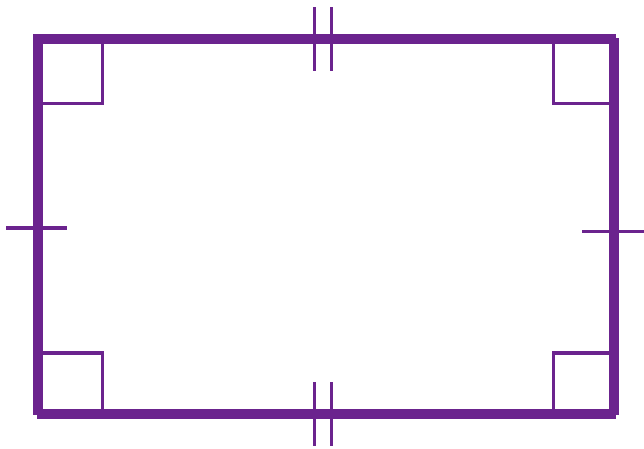
# Quadrilaterals

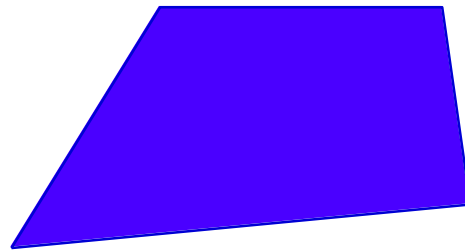


**A rectangle has four right angles.**

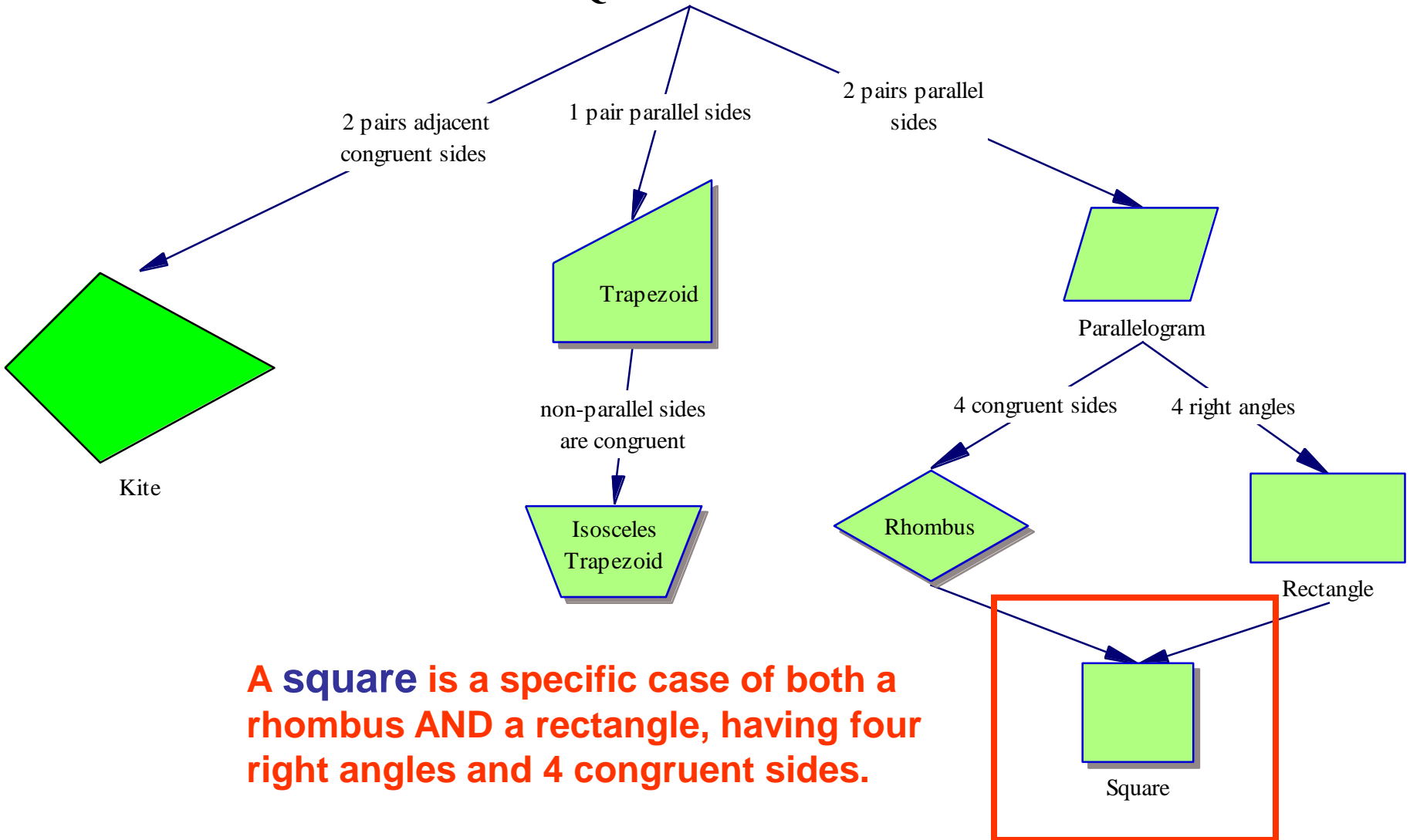
# Rectangle

- Still has two pairs of parallel sides; with opposite sides congruent.
- Has four right angles





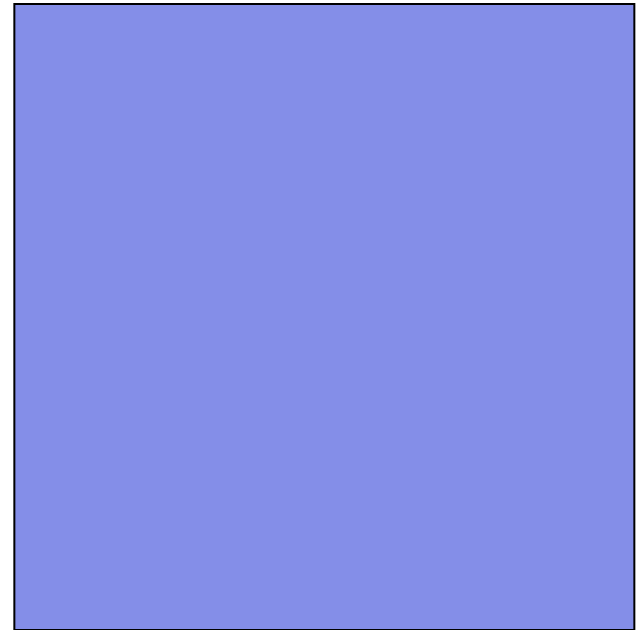
# Quadrilaterals

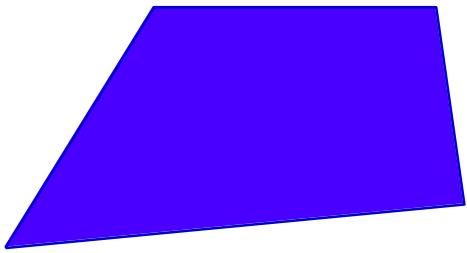


**A square is a specific case of both a rhombus AND a rectangle, having four right angles and 4 congruent sides.**

# Square

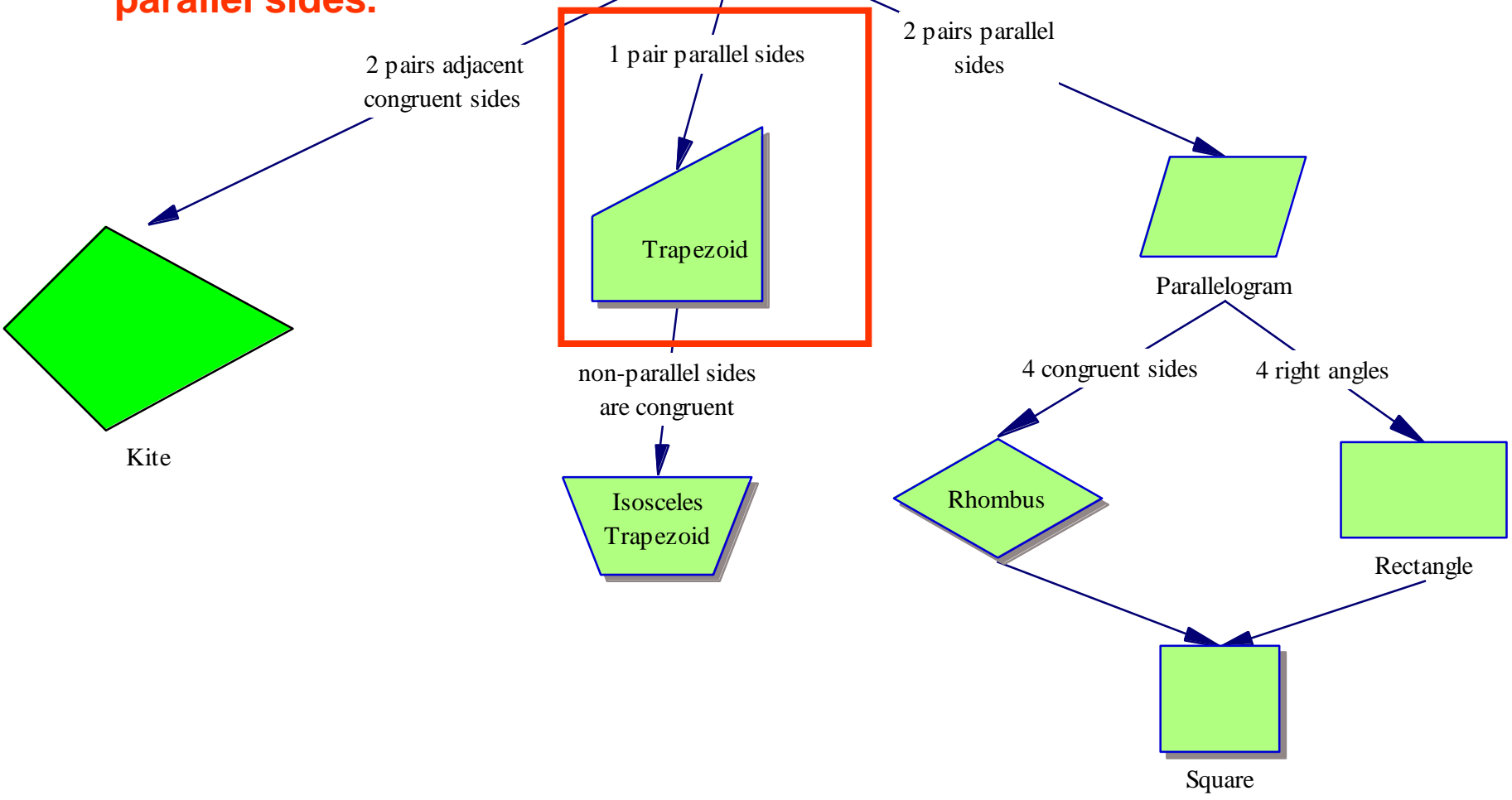
- Still has two pairs of parallel sides.
- Has four congruent sides
- Has four right angles



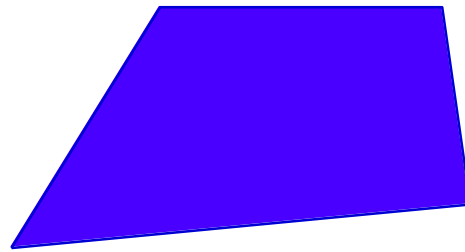


# Quadrilaterals

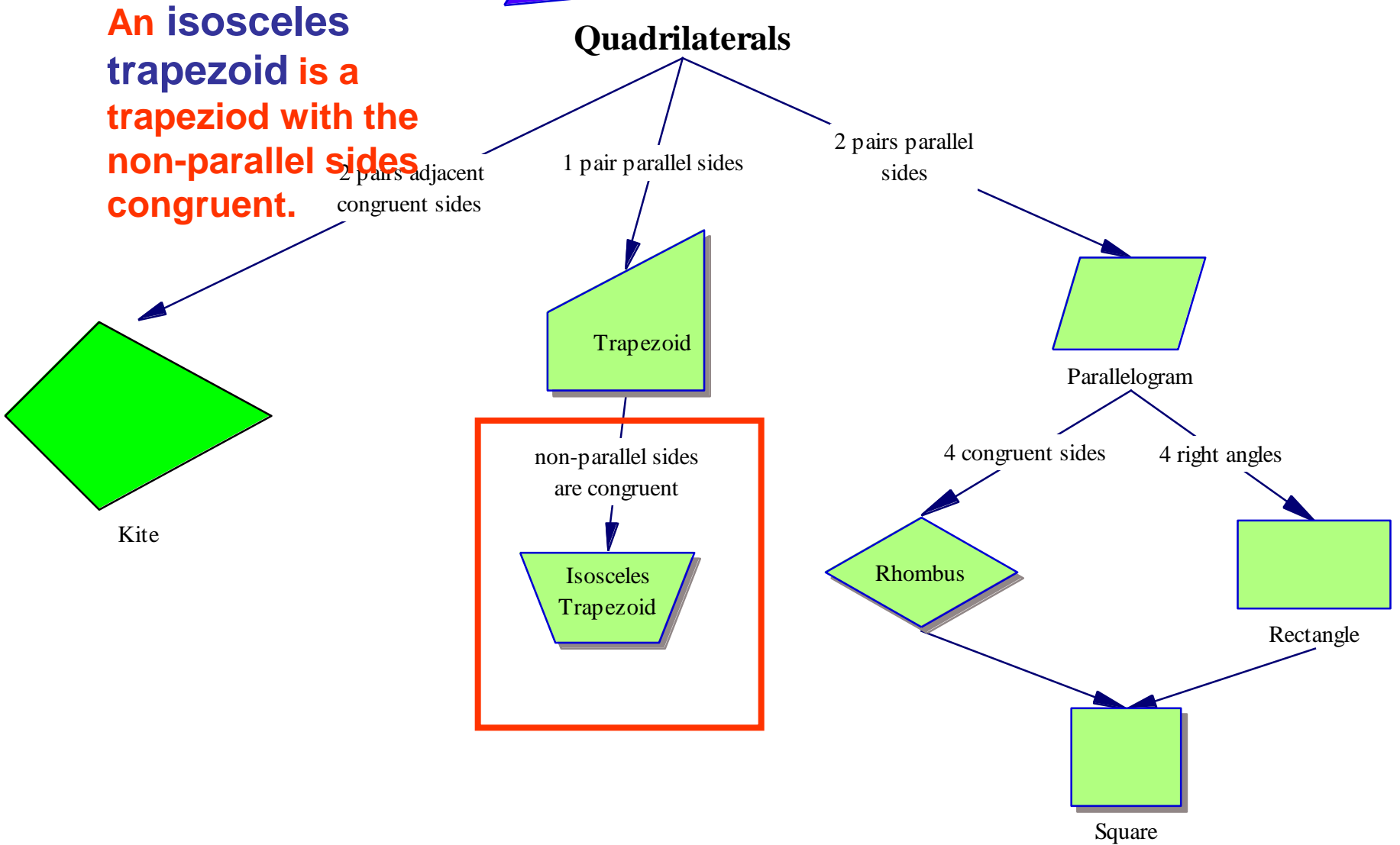
**A trapezoid has only one pair of parallel sides.**





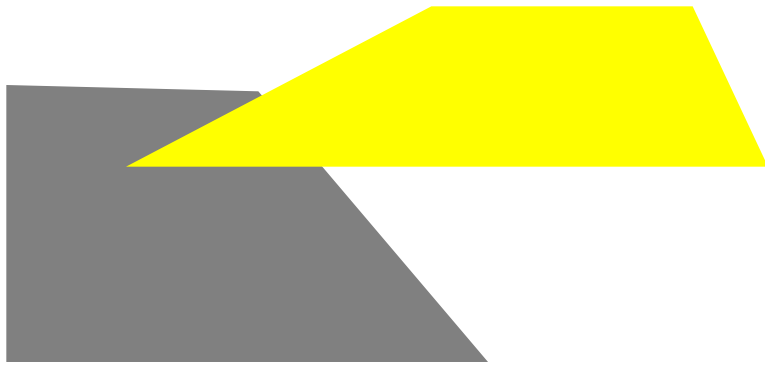


# Quadrilaterals

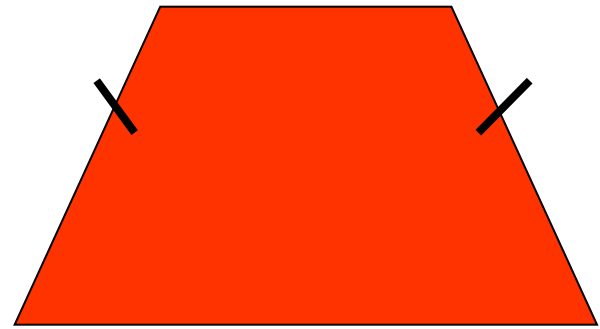


# Trapezoid

- has one pair of parallel sides.

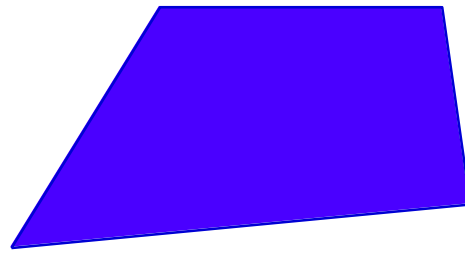


trapezoids



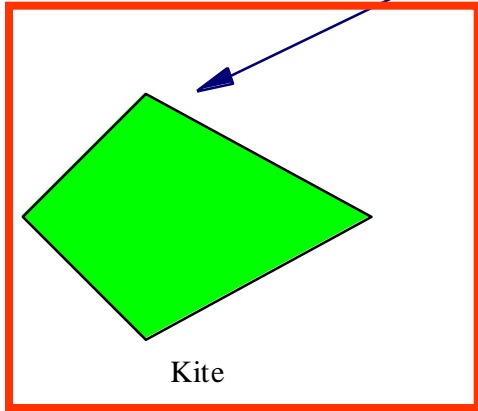
Isosceles trapezoid

Isosceles Trapezoid – the non-parallel sides are congruent.



# Quadrilaterals

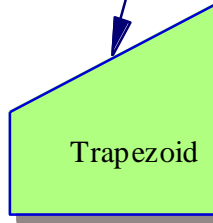
2 pairs adjacent  
congruent sides



Kite

An **kite** is a quadrilateral with **NO** parallel sides but **2** pairs of adjacent congruent sides.

1 pair parallel sides



Trapezoid

non-parallel sides  
are congruent



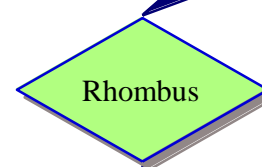
Isosceles  
Trapezoid

2 pairs parallel  
sides



Parallelogram

4 congruent sides



Rhombus

4 right angles



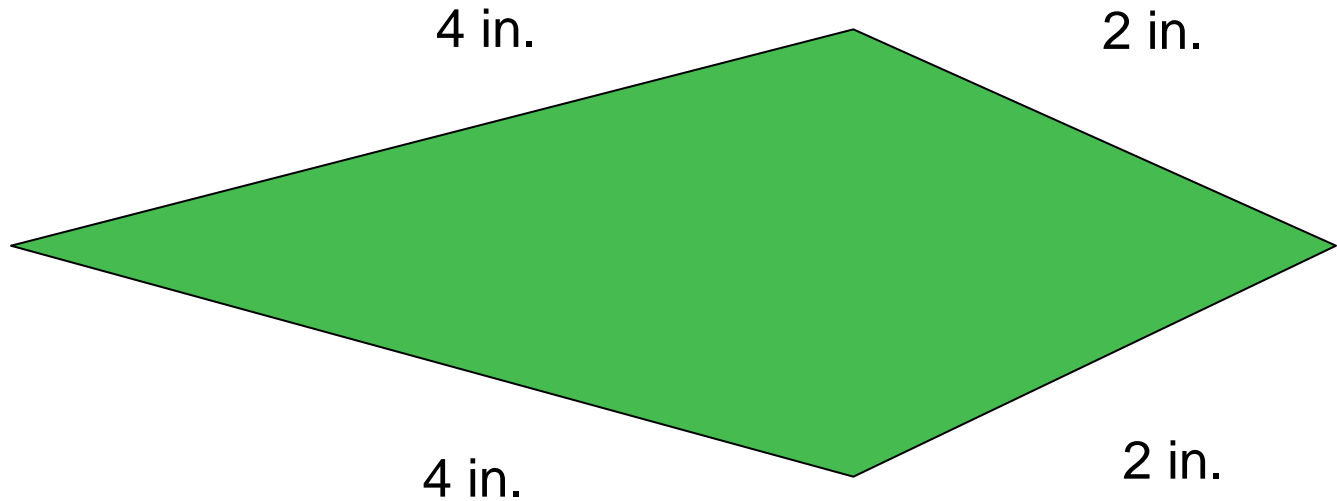
Rectangle



Square

# Example of a Kite

A **kite** is a quadrilateral with **NO** parallel sides.  
It does have **2** pairs of adjacent, congruent sides.



# Quadrilateral Angles

- If you add all the interior angles in a quadrilateral together, it will equal 360 degrees.