7.4 Quadrilaterals p.294

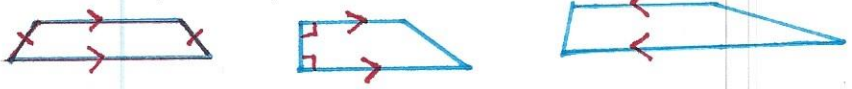
A quadrilateral is any polygon with 4 sides.

- When identifying quadrilaterals, use the name that is most specific.
- Arrows indicate parallel sides

Types:

❖ Trapezoid:

- quadrilateral w/exactly one pair of parallel sides

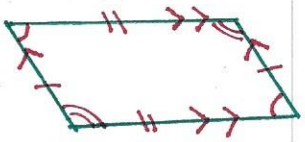


❖ Kite:

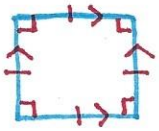
- quadrilateral w/2 pairs of congruent, adjacent sides and opposite sides that are not congruent
- one set of opposite, congruent angles

❖ Parallelogram:

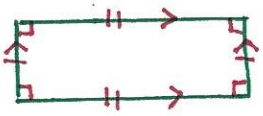
- quadrilateral w/opposite sides congruent and parallel
- opposite angles congruent



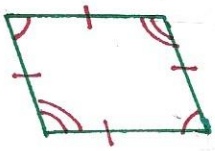
- Square
  - ✓ parallelogram
  - ✓ 4 congruent sides
  - ✓ 4 right angles



- Rectangle
  - ✓ parallelogram
  - ✓ 2 pairs of congruent sides
  - ✓ 4 right angles

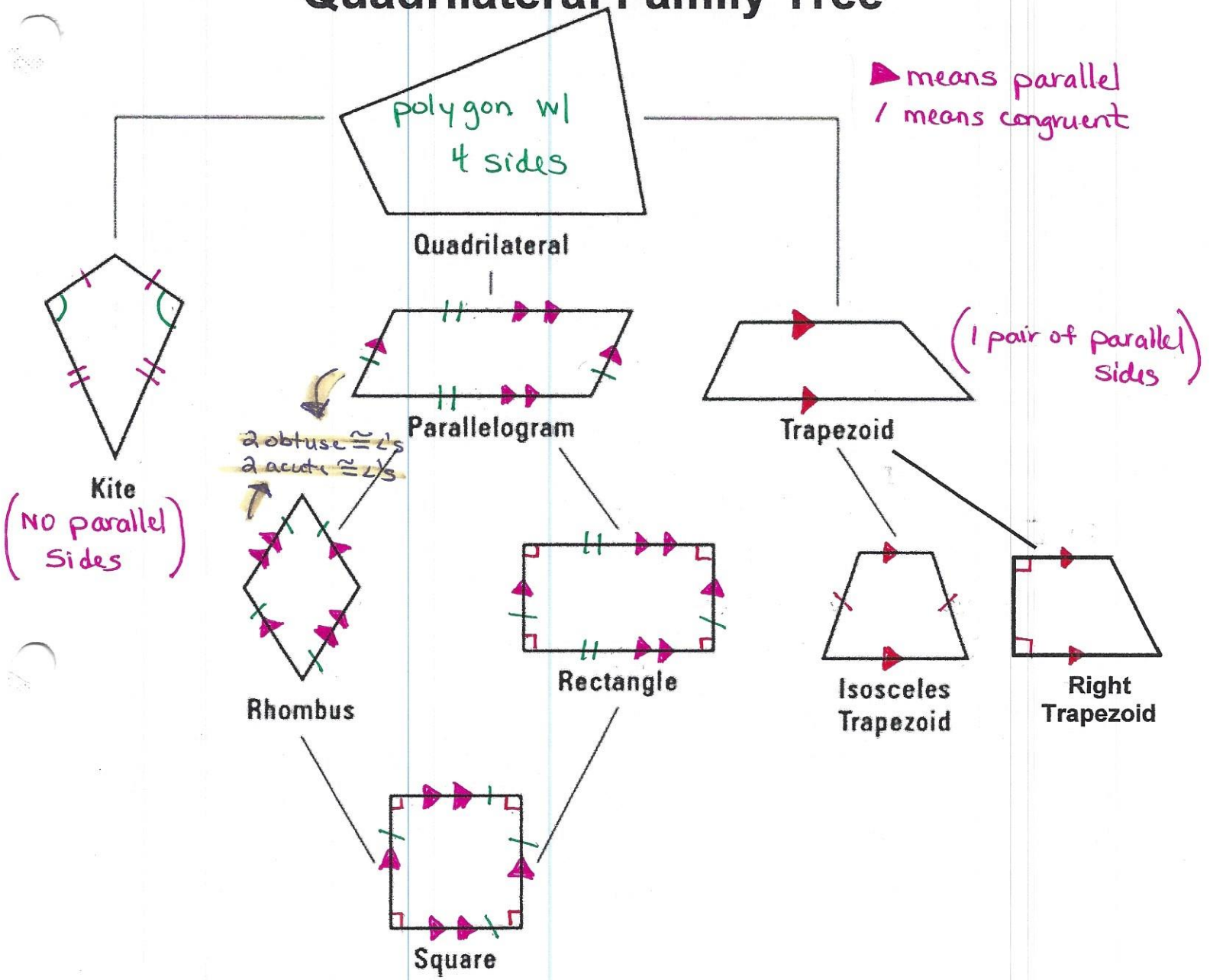


- Rhombus
  - ✓ Parallelogram
  - ✓ 2 obtuse angles
  - ✓ 2 acute angles



7.4 p.294

Quadrilateral Family Tree



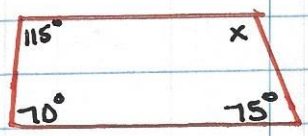
When identifying quadrilaterals, use the name that is most specific.

7.4 Quadrilaterals (continued)

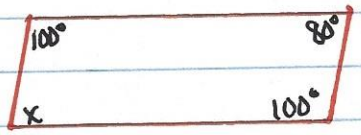
The sum of the angle measures of a quadrilateral is 360°.

Find the value of x. (not drawn to scale)

1.)

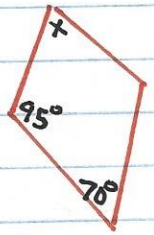


2.)



3)

4)

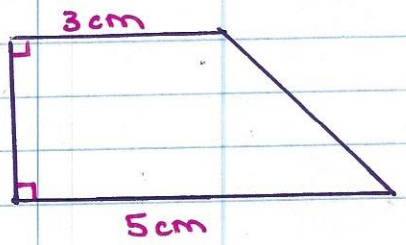


1. 100° 2. 80°

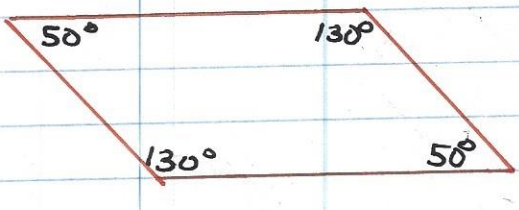
3. 65° 4. 100°

Construct each quadrilateral.

1.) a right trapezoid whose parallel sides have lengths of 3 cm and 5 cm. Label.



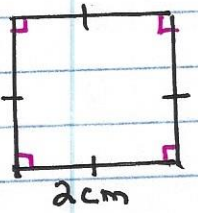
2) a parallelogram w/ a 50° angle + 130° angle. Label



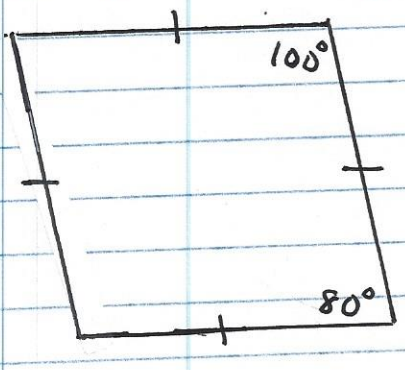
3) a kite that is also a rectangle.

not possible

4) a square w/ a side length of 2 cm; label



5) a rhombus w/ 100° angle and 80° angle; label



6) a trapezoid w/ exactly one right angle; label

not possible

Remember:

* Parallelogram
  - vertical angles are ≅
  - adjacent angles are supplementary