

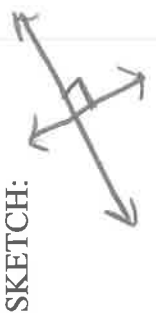
5-5 Properties of Quadrilaterals

• I can determine the type of quadrilateral based off the given property(s).



1. Lines that are parallel have equal slopes. SKETCH:

2. Lines that are perpendicular have slopes that are opposite reciprocals.



SKETCH:

3. PROPERTIES OF QUADRILATERALS -

	Parallelogram	Rectangle	Rhombus	Square
2 pairs of opposite sides parallel	✓	✓	✓	✓
2 pairs of opposite sides congruent	✓	✓	✓	✓
All 4 sides congruent			✓	✓
All 4 angles congruent		✓		✓

4. In order to call a quadrilateral a parallelogram what must be true of the quadrilateral? Sketch one and label defining features:



2 pairs of opposite sides parallel

5. In order to call a quadrilateral a rectangle what must be true of the quadrilateral? Sketch one and label defining features:



4 right angles

6. In order to call a quadrilateral a rhombus what must be true of the quadrilateral? Sketch one and label defining features:



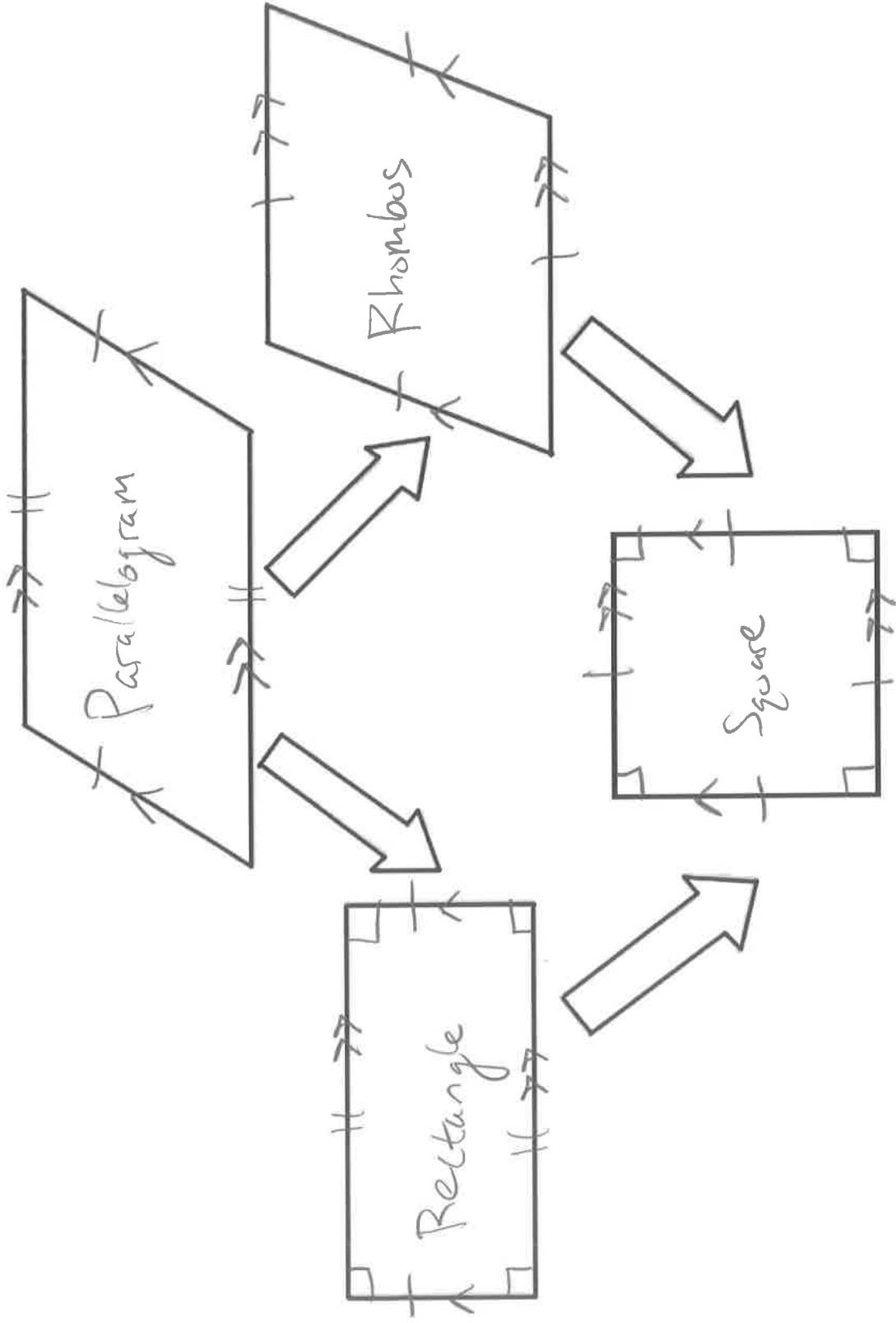
2 pairs opposite sides parallel + 4 congruent sides

7. In order to call a quadrilateral a square what must be true of the quadrilateral? Sketch one and label defining features:



4 congruent sides + angles

8. Below is a hierarchy of quadrilaterals we will study. Write the names on each of the figures and mark parallel sides, lengths that are the same size and angles that have the same measure.



The questions below provide hints as to which quadrilateral they are describing. Determine if a parallelogram, rectangle, rhombus or square is described.

9. My definition says that I have four sides of equal length.

Rhombus, Square

10. My opposite angles are congruent.

Parallelogram, Rhombus, Rectangle, Square

11. My opposite sides are the same length, but my consecutive sides are not.

Parallelogram, Rectangle

12. I have four right angles.

Rectangle, Square

13. All of my sides are equal length, but not all of my angles are.

Rhombus

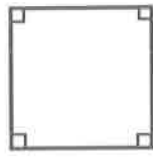
14. Based off my angles, I could be a rectangle and based of my sides, I could be rhombus.

Square  $\rightarrow$  equal angles + equal sides.

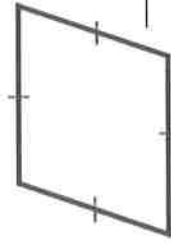
15. I have four angles with the same measurement, but my side lengths are not all the same length.

Rectangle

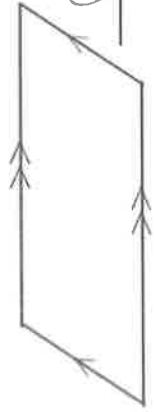
16. Identify the quadrilaterals below.



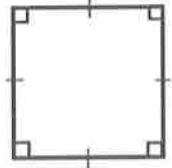
Rectangle



Rhombus



Parallelogram



Square