

Topic A Quiz Prep (Lessons 1 – 7)

Items 1 & 4: Hierarchy of Quadrilaterals based on Properties.

The lessons in this topic presented each of the quadrilaterals shown to the right. **Knowing the hierarchy is important** because the shapes are classified based on their properties. Properties are features that must be true and the further you look down the hierarchy the shapes become more specific. **A shape can always be classified by its properties AND by the properties of the shape ABOVE it.** For example, look at the square at the bottom of the hierarchy – a square may also be classified most specifically as a square, but it may also be classified as a rectangle, a rhombus, a kite, a parallelogram, a trapezoid and a quadrilateral! On the other hand, a trapezoid can only be classified as a trapezoid or as a quadrilateral.

You should know the properties of each quadrilateral in the hierarchy:

Quadrilaterals: 4-sided polygons with interior angles that sum to 360 degrees.

Trapezoids: have at least 1 pair of parallel sides. Have at least 2 pairs of supplementary angles.

Parallelograms: Opposite sides are parallel. Opposite sides have the same length.

Opposite angles have the same measure. Diagonals intersect at midpoint.

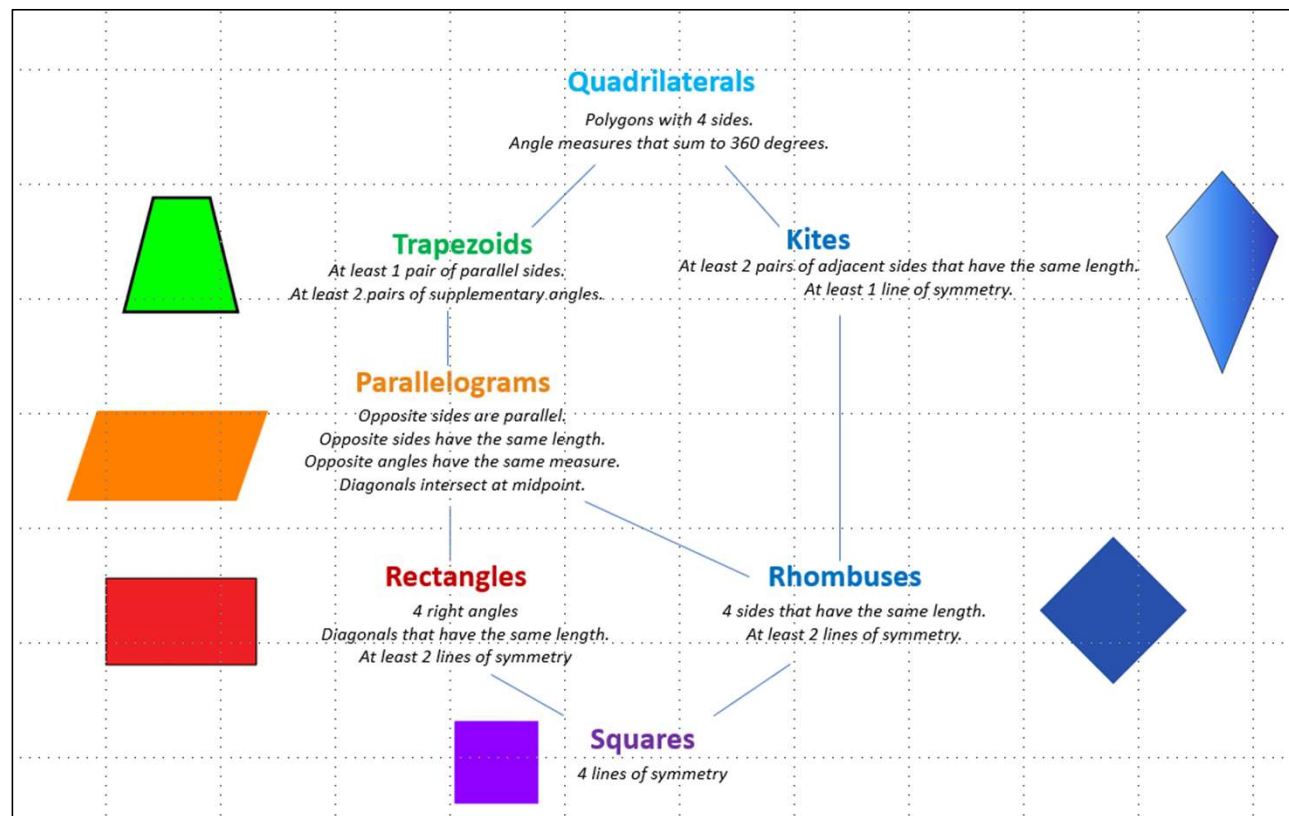
Rectangles: 4 right angles. Diagonals that have the same length. At least 2 lines of symmetry.

Kites: At least 2 pairs of adjacent sides that have the same length. At least 1 line of symmetry.

Rhombuses: 4 sides that have the same length. At least 2 lines of symmetry.

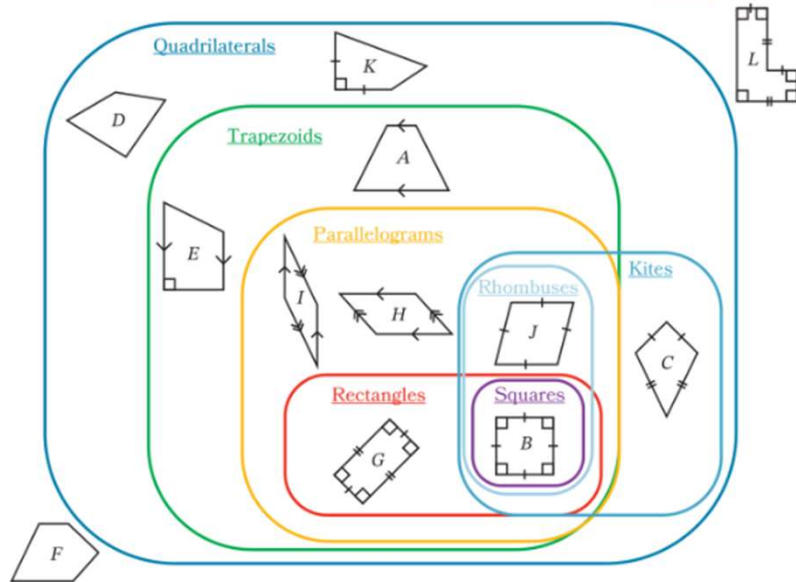
Square: 4 lines of symmetry. And all the properties of everything above it!

REVIEW THIS HIERARCHY!



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Items 2 & 3: Describe relationships between quadrilaterals.



REVIEW THIS VENN DIAGRAM!

Polygon	A	B	C	D	E	F	G	H	I	J	K	L
Quadrilateral	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗
Trapezoid	✓	✓			✓		✓	✓	✓	✓		
Parallelogram		✓					✓	✓	✓	✓		
Rectangle		✓					✓					
Rhombus		✓									✓	
Square		✓										
Kite		✓	✓									

You will be allowed to reference the Venn Diagram above for this question. It will be a series of statements based on the relationships of properties. Here are some examples of statements that describe relationships:

- All rectangles are trapezoids.
- Some rhombuses are rectangles.
- Some kites are trapezoids.
- All rectangles are parallelograms.
- Some kites are parallelograms.
- All squares are trapezoids.