

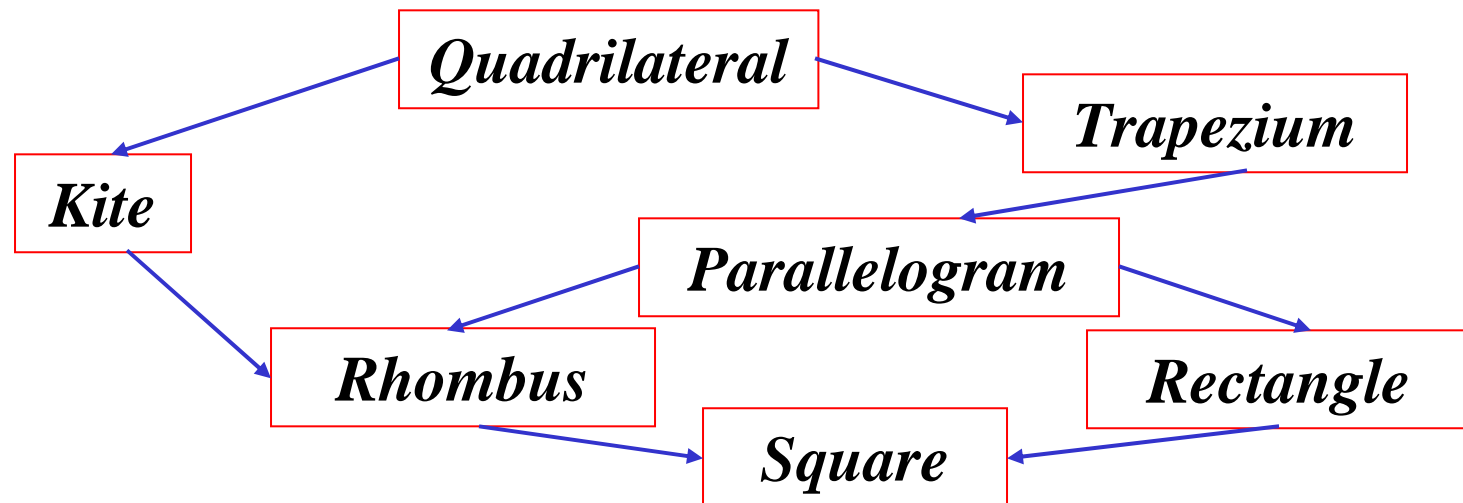
The Quadrilateral Family

Quadrilaterals can be classified according to the features they possess.

As you branch down the quadrilateral family, the quadrilaterals become more specialised in their features.

Any property that you know about the quadrilaterals a particular shape has branched from can be used for that quadrilateral as well as the specific properties for that shape.

e.g. a rhombus has the properties of a rhombus, parallelogram, trapezium, kite and quadrilateral.



Quadrilateral

- * has 4 sides
- * has 4 angles
- * no specific properties

Kite

- * adjacent sides in a kite are =
- * diagonals in a kite are \perp
- * Area = $\frac{1}{2}xy$

Trapezium

- * one pair of parallel sides
- * Area = $\frac{1}{2}h(a+b)$

Parallelogram

- * two pairs of parallel sides
- * opposite sides in a || gram are =
- * opposite \angle 's in a || gram are =
- * diagonals in a || gram bisect
- * Area = bh

NOTE: if one pair of sides are both = and parallel, then shape is ||gram

Kite

Parallelogram

Rectangle

* \angle 's in a rectangle = 90°

* diagonals in a rectangle are =

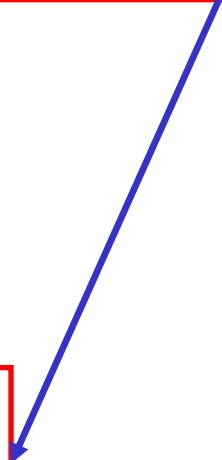
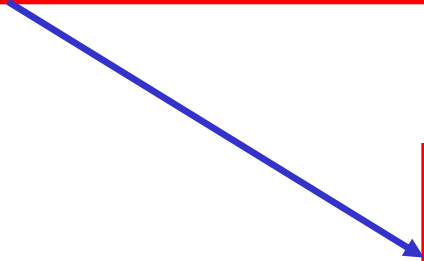
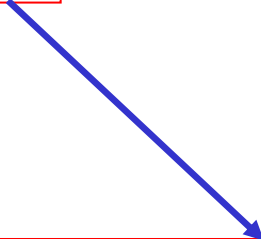
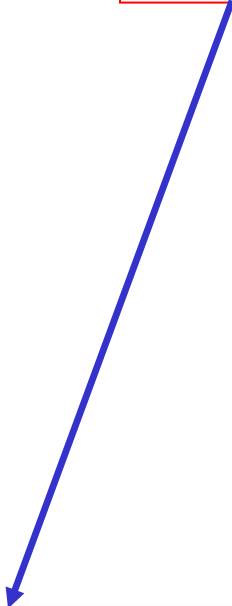
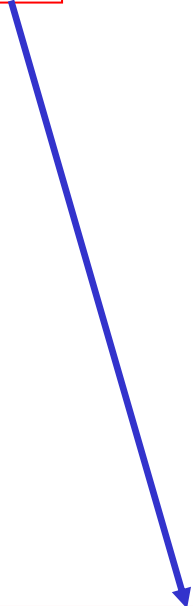
* Area = lb

Rhombus

* diagonals in a rhombus bisect vertex

Square

* Area = s^2



Exercise 8D; 2bd, 5, 6, 9, 11, 12, 15, 20*

Exercise 8E; 2a, 3, 7, 9, 10b, 15a, 16, 17, 19, 21*

Exercise 8F; 4, 5, 12, 13