

Thursday 9th July – Quadrilaterals

- Today we will be looking at the properties of quadrilaterals.
- Have think about what you already know about quadrilaterals?
- Can you define what a quadrilateral is?
- How can you tell the difference between triangle and a quadrilateral?

Quadrilaterals

- 'Quadrilateral' means four sides.
- 'Quad' means four and 'lateral' means sides.
- A quadrilateral is a 2D shape that is closed with four straight sides.
- Quadrilaterals have four vertices with interior angles that add up to 360° .

The shapes below are all types of quadrilaterals.



Parallelogram



Rectangle



Rhombus



Square



Trapezium (UK)
Trapezoid (US)

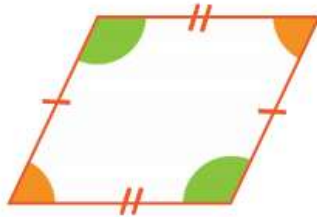


Kite

A **vertex** (plural: vertices) is a point where two or more line segments meet. It is a Corner.

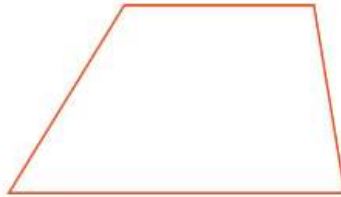
Types of Quadrilateral

parallelogram



2 pairs of equal sides
Diagonally opposite angles are equal

trapezium



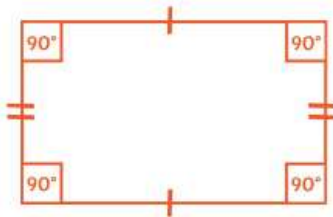
1 pair of sides are parallel

rhombus



All sides are equal
Diagonally opposite angles are equal

rectangle



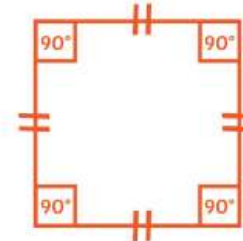
2 pairs of equal parallel sides
4 right angles (90°)

kite



2 pairs of sides of equal length
1 pair of opposite angles is equal.

square



4 equal parallel sides
4 right angles (90°)

Have a look at these quadrilaterals, trace your finger along each shape to check each shape has four sides. Try to remember the name of each shape.

Quadrilaterals

1 Use the word bank to label each quadrilateral.

rhombus

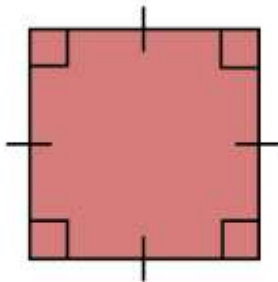
parallelogram

trapezium

rectangle

square

a)



b)



1

rhombus

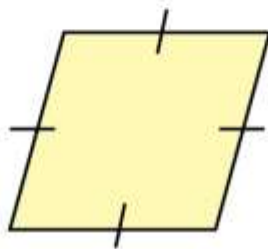
parallelogram

trapezium

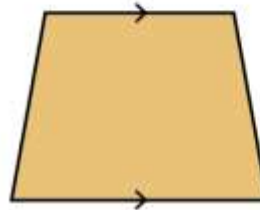
rectangle

square

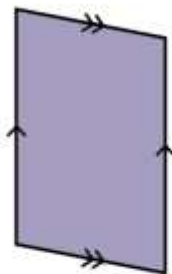
c)



e)



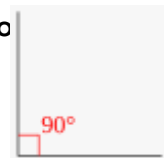
d)



How did you know which shape was which?

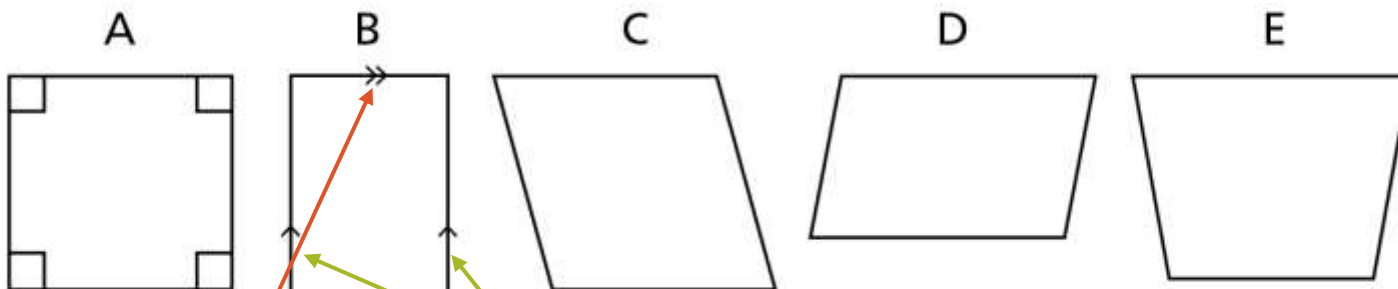


Remember, a **right angle** means the interior angle (angle inside the shape) is 90°



2

Here are some quadrilaterals.



These double arrows means that these two edges are parallel to each other.

These two single arrows means that these two edges are parallel.

a) Mark any right angles on the shapes.

One shape has been done for you.

b) Mark any pairs of parallel lines.

One shape has been done for you.

Parallel lines- are two straight **lines** in a plane that do not intersect (meet or cross over) at any point.

2 c) Which shapes do not have any right angles?

d) Which shapes have two pairs of parallel lines?


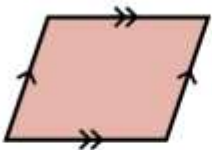
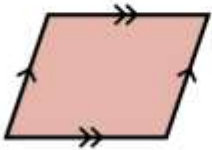
e) Which shapes have four equal sides?

Compare answers with a partner.

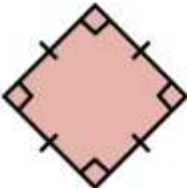
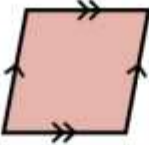
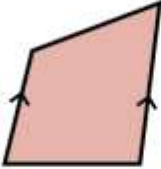




3 Complete the table.

Shape	Polygon?	Number of sides	Number of right angles	Number of pairs of parallel sides	Number of equal sides
	Yes	4	4	2	2 pairs
					
					

3

Shape	Polygon?	Number of sides	Number of right angles	Number of pairs of parallel sides	Number of equal sides
					
					
					



What is the same about all of the shapes?

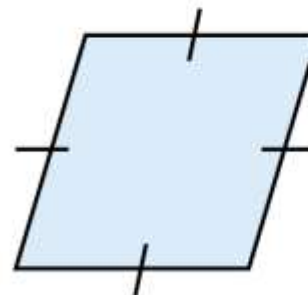
What is different?



5



This is a square
because it has got
4 equal sides.



Do you agree with Rosie? _____

Explain your answer.





6

Complete this Frayer Model to describe a quadrilateral.

My definition	Key characteristics
Example	Non-example

Quadrilateral