1) Name and identify the properties of these quadrilaterals:

Name: ***parallelogram***

Pairs of equal length sides: ***2***

Pairs of parallel sides: ***2***

Number of right angles: ***0***

Name: ***rectangle***

Pairs of equal length sides: ***2***

Pairs of parallel sides: ***2***

Number of right angles: ***4***

Name: ***trapezium***

Pairs of equal length sides: ***1***

Pairs of parallel sides: ***1***

Number of right angles: ***0***

2) Draw a quadrilateral with these properties:

- two pairs of equal length sides
- no right angles
- not a parallelogram

What could your quadrilateral be?
kite

What quadrilaterals could you definitely not draw from this description?
square, rectangle, trapezium, parallelogram

1) What do any of these shapes have in common?
Answers may include:
All have four sides and four vertices; the square and rectangle have two pairs of parallel sides and four right angles; the rectangle and kite have two pairs of equal length sides.

2) What is different about them?
Answers may include:
The kite only has one pair of equal angles; the trapezium has two pairs of equal angles; only two of the shapes have right angles.

3) Use isometric (dotty) paper to investigate how many quadrilaterals you can draw which have:

a) only one set of parallel lines;
Children may draw trapeziums.

b) no right angles;
Children may draw parallelograms, trapeziums, kites or any irregular quadrilateral fitting the description.

c) all sides of equal length.
Children may draw a square or a rhombus.

1) Bridie says:

> I can draw a quadrilateral with only two right angles and three sides of equal length.

Find out if she is correct by drawing or making quadrilaterals to see if any fit her description.

Is she correct?

No

Can you explain why?

Accept answers which show that if a quadrilateral has only two right angles, it cannot have three sides of equal length.