

Diagonal lines

Investigate diagonal lines drawn in quadrilaterals



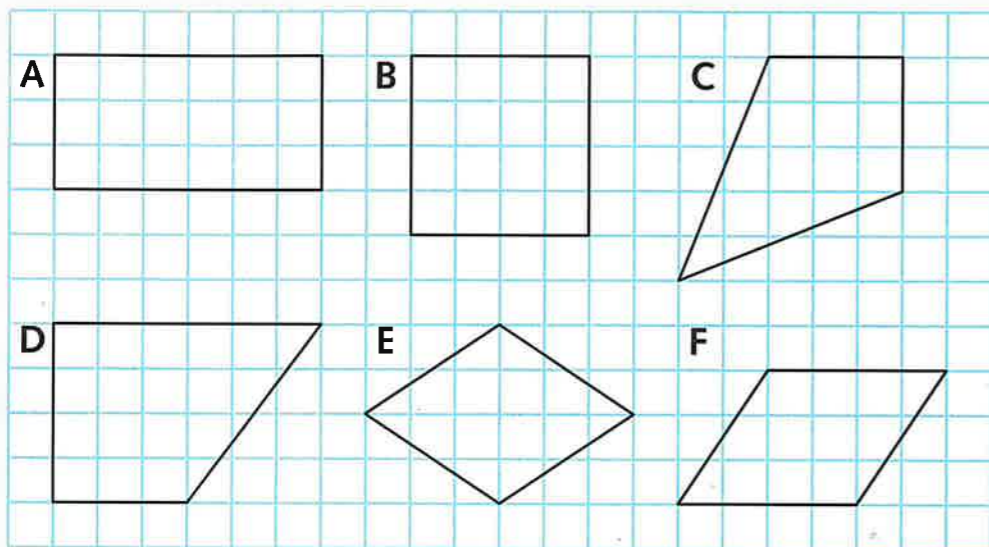
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Copy each quadrilateral onto 1 cm squared paper.

- Draw all the diagonal lines with a ruler.
- Circle the diagonals that cross over each other at right angles.

You will need:

- 1 cm squared paper
- ruler



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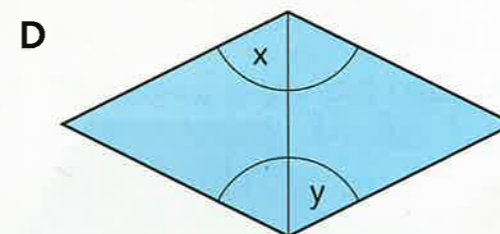
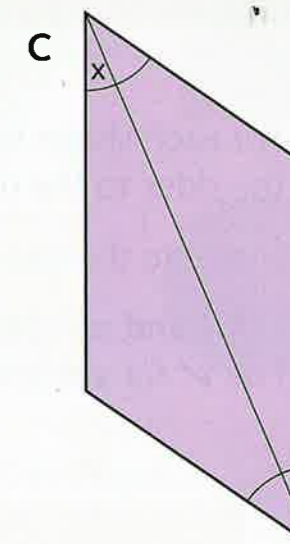
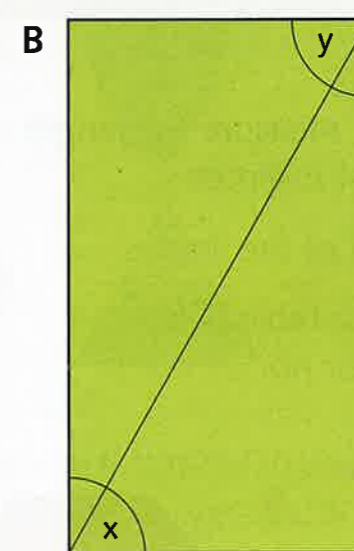
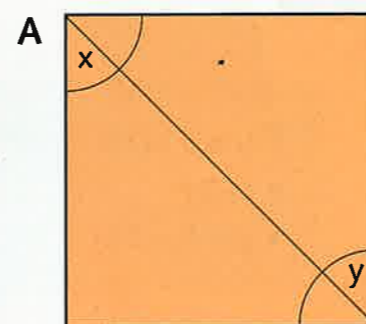
1 Using Resource 47: Diagonals, draw the diagonal lines on the six shapes with your ruler.

- Mark each pair of parallel sides you find.
- Measure the diagonal lines and mark lines that are of equal length.
- Measure the angles where the diagonals intersect and mark the right angles.
- Measure the angles where the diagonals bisect each vertex of the shape.
 - Where all angles are the same, mark them with the letter x.
 - Where there are two sizes of angle, use the letters x and y.

You will need:

- Resource 47: Diagonals
- 1 cm squared paper
- ruler
- protractor

4 Copy the table below.



Shape	Size of angle x	Size of angle y
A – square	45°	
B – rectangle		
C – parallelogram		
D – rhombus		

- For each shape measure the sizes of the angles marked x and y between the diagonal line and the parallel sides. Record your results in the table.
- Write what you notice about your results.



Challenge 3

Investigate the diagonals of a kite.

- On 1 cm squared paper, draw six different kites.
- Write what you find out about the diagonals of a kite.

You will need:

- 1 cm squared paper
- ruler
- protractor

