GCSE HIGHER · REVISION MAT 3

Properties of quadrilaterals

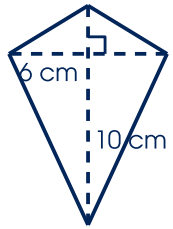
1 Name a quadrilateral with four equal sides but no right angles.

2 How many lines of symmetry does a kite have?

3 Explain why a rhombus is a special type of parallelogram.

4 A kite has diagonals of 6 cm and 10 cm.

Find its area.

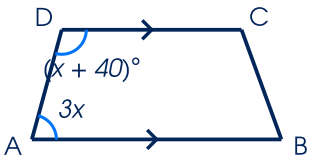


5 Show that adjacent angles in a parallelogram add up to 180°.

6 In trapezium ABCD, AB is parallel to DC.

Angle A = $3x$ and angle D = $(x + 40)°$.

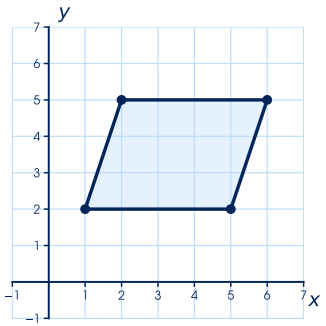
Find both angles.



7 Explain why the diagonals of a square are equal and meet at right angles.

8 Which special quadrilateral has vertices (1, 2), (5, 2), (6, 5), (2, 5)?

Justify your answer.



ANSWERS · REVISION MAT 3

Properties of quadrilaterals

1 Rhombus

2 1

3 Its opposite sides are parallel, and in addition all four sides are equal.

4 $\frac{1}{2} \times 6 \times 10$

30 cm²

5 They are co-interior angles between parallel sides.

6 $4x + 40 = 180 \Rightarrow x = 35$

A = 105°, D = 75°

7 A square is both a rectangle (equal diagonals) and a rhombus (perpendicular diagonals).

8 Two sides horizontal, length 4

Other sides $\sqrt{10}$, parallel

A parallelogram
(not a rhombus: $4 \neq \sqrt{10}$)

Mr&Mrs MATHS