

Quadrilaterals and Polygons – Answers

Angles in Polygons

- 1) (a) 720° (b) 900° (c) 1440°
2) (a) 360° (b) 360° (c) 360°
3) (a) 40° (b) 9° (c) 20°
4) (a) 150° (b) 156° (c) 172°
5) (a) 20 (b) 30 (c) 8
6) $x = 36^\circ$

Quadrilateral questions

- 1) Kite, Isosceles Trapezium
2) Square, Rectangle, Isosceles Trapezium
3) None
4) Diagonals cross at right angles
5) All 4 sides equal in length, or 2 lines of symmetry, or both diagonal bisect the corner angles, or ...
6) Square
7) In a parallelogram the equal angles are at opposite corners, in an isosceles trapezium they are at adjacent corners.

Diagonals of a polygon

- 1) 14
2) (i) 4 (ii) 7 (iii) This would count each diagonal twice
3) (i) $n - 3$ (ii) n (iii) $\frac{n(n-3)}{2}$