Test answers - Angles and polygons

Year: Year 5 · Duration: 40 minutes · /20

Answer to Question 1 (4 marks)

(a) 160° is more than a right angle (90°) but less than a straight line (180°), so it is **obtuse**. (1 mark)

(b) 300° is more than 180° but less than a full turn, so it is a **reflex** angle. (1 mark)

(c) A full turn is 360°; half of it is 180° and a quarter is 90°. Answer: **90°, 180° and 360°**. (1 mark)

(d) Each hour mark on a clock is 360 ÷ 12 = 30° apart. At 5 o'clock the hands are 5 marks apart: 5 × 30 = **150°**. (1 mark)

Answer to Question 2 (4 marks)

(a) x = 180 − 72 = **108°**. (1 mark)

(b) 130 + 95 = 225. y = 360 − 225 = **135°**. (1 mark)

(c) 55 + 35 = 90. z = 180 − 90 = **90°**. (1 mark)

(d) 360 ÷ 4 = **90°**. (1 mark)

Answer to Question 3 (4 marks)

(a) **Heptagon**. (1 mark)

(b) A regular polygon has all sides equal and all angles equal. An irregular polygon does not. (1 mark)

(c) 8 × 9 = **72 cm**. (1 mark)

(d) 54 ÷ 9 = **6 sides** (a hexagon). (1 mark)

Answer to Question 4 (3 marks)

(a) A quarter turn clockwise from north points to **east**. (1 mark)

(b) From east, turn clockwise in steps of 90°: south (90°), west (180°), north (270°). It faces **north** again. (1 mark)

(c) South is opposite north, so it needs a half turn: **180°**. (1 mark)

Answer to Question 5 (5 marks)

(a) 6 × 7 = **42 m**. (1 mark)

(b) 42 × 9 = **£378**. (2 marks)

(c) 8 × 25 = **200 cm**. (1 mark)

(d) The outside turn is 360 ÷ 8 = 45°. The inside angle is 180 − 45 = **135°**. (1 mark)