

Pages 50–51 Scales

- 1** a 14 m b 58 kg c 430 grams d 5.1 cm e 75 mph f 64 litres
2 a 1.1 kg b 360 g
3 3 h 55 m
4 a 11:40 b 1 h 25 m c i 20 m ii 46 m
5 1.62 cm

Pages 52–53 Metric units

- 1** a 13.5 kg b £23 c £8
2 6
3 a 3250 g b 6.5 l c 42.5 cm
4 4 kg 200 g
5 7.8 kg (1 mark for 7800 g)
6 £4 (1 mark for 400)
7 $92\frac{3}{4}$ kg
8 0.5 litres or 50 cl or 500 ml (1 mark for value, 1 mark for units)

Pages 54–55 Imperial units

- 1** 12
2 8
3 56
4 66
5 3
6 2.5
7 4.5
8 8.5 to 9 pounds
9 80 km
10 $\frac{1}{2}$ lb, 10 oz, 600 g, 1 kg
11 8 pounds (1 mark for 3.5 kg)
12 1 m 80 cm
13 2 litres \approx 3.5 pints

Pages 56-57 Measuring angles and bearings

1 360°

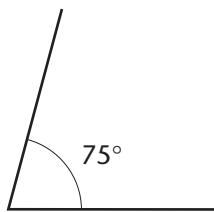
2 90°

3 a Acute b Reflex

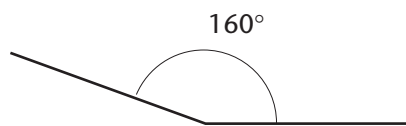
4 a $35-45^\circ$ b $275-285^\circ$

5 a 50° b 150°

6 a



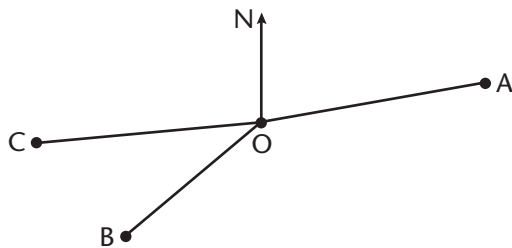
b



7 a A is 9 km, B is 7 km, C is 10 km

b A is 080° , B is 230° , C is 300°

8 Shown half scale



Pages 58-59 Angle facts

1 60°

2 80°

3 25°

4 88°

5 78°

6 18°

7 70°

8 98°

9 87°

10 103°

Pages 60–61 Angles in parallel lines and polygons

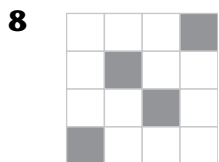
- 1 $a = 50^\circ$ $b = 130^\circ$ $c = 50^\circ$
- 2 $d = 72^\circ$ because alternate angles
- 3 $e = 55^\circ$ because corresponding angles
- 4 $f = 120^\circ$ because allied angles
- 5 $g = 50^\circ$ because (vertically) opposite angles, $h = 130^\circ$ because allied angles
- 6 540°
- 7 Each interior angle is 120° and Each exterior angle is 60°
- 8 $x = 72^\circ$ $y = 144^\circ$ $z = 72^\circ$
- 9 Angles at any corner are $90^\circ = 360^\circ - 135^\circ - 135^\circ$ and all sides equal

Pages 62–63 Symmetry

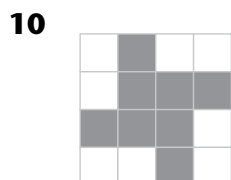
- 1 2
- 2 4
- 3 1
- 4 1
- 5 It has no lines of symmetry and It has rotational symmetry of order 2

- 6 a  b 5

- 7 a i 2 ii 2
 b i 0 ii 2
 c i 0 ii 2
 d i 1 ii 1

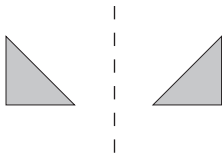


- 9 i 8, 0, 7, 6, 4 ii 8, 6, 7, 6, 4

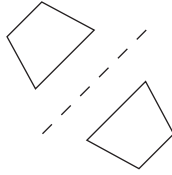


Pages 64–65 Reflections and rotations

1



2



3 180°

4 270°

5 **i** B 90° **C** 180° **D** 270° (reversed if all anticlockwise) **ii** All clockwise **iii** All origin

6 **B** y -axis **C** $y = x$ **D** x -axis

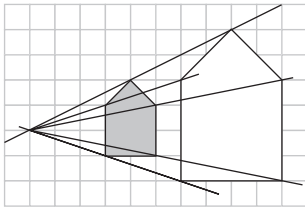
7 **a** $A(-1, 3): A'(3, -1)$ $B(-3, 1): B'(1, -3)$ $C(-1, 1): C'(1, -1)$ **b** x - and y -coordinates have swapped over.

8 **i** C **ii** E **iii** D **iv** B

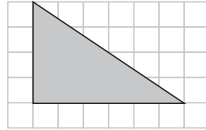
Pages 66–67 Enlargements

1 A 2 B $2\frac{1}{2}$

2



3



4



5 $A'(2, 2)$, $B'(2, 8)$, $C'(6, 2)$

6 $A(2, 1)$, $B(1, 2)$, $C(2, 2)$

7 **a** B **b** A **c** C

Pages 68–69 3-D shapes

1 Cube Cylinder Cuboid

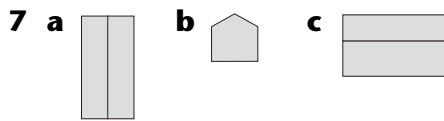
2 a 12 b 6 c 8

3 a 8 b 5 c 5

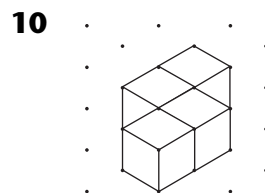
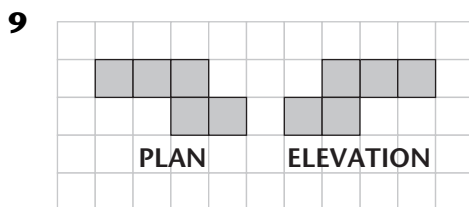
4 Triangular prism

5 a, b and c

6 Square-based pyramid



8 a 3 b Infinite c 7



(1 mark for any isometric diagram with 4 cubes)

Pages 70–71 Perimeter and area

1 24 cm

2 24 cm (1 mark for units)

3 12 cm² (1 mark for units)

4 a 12 cm b 6 cm² (1 mark for both units)

5 a 36 cm b 60 cm² (1 mark for both units)

6 A = 6 cm² B = 5 cm² C = $4\frac{1}{2}$ cm² D = 6 cm²

7 $7\frac{1}{2}$ m² (1 mark for units)

8 21 cm² (1 mark for units)

Pages 72–73 Circumference and area of a circle

- 1 15.7 cm
- 2 25.1 m
- 3 8 cm
- 4 24.6 cm (1 mark for units)
- 5 25.7 cm
- 6 28.3 cm^2
- 7 19.6 cm^2 (1 mark for units)
- 8 $81\pi \text{ cm}^2$
- 9 50.3 cm^2
- 10 21.5 cm^2

Pages 74–75 Volume

- 1 48 cm^3
- 2 a 15 cm^3 b 46 cm^2
- 3 2 cm
- 4 210 cm^2 (1 mark for units)
- 5 4 cm
- 6 8 cm
- 7 600 cm^3 (6 m^3)
- 8 D = 180 cm^3 , C = 240 cm^3 , A = 288 cm^3 , B = 625 cm^3
- 9 800 litres (1 mark for $800\,000 \text{ cm}^3$ or 0.8 m^3)
- 10 4 cm