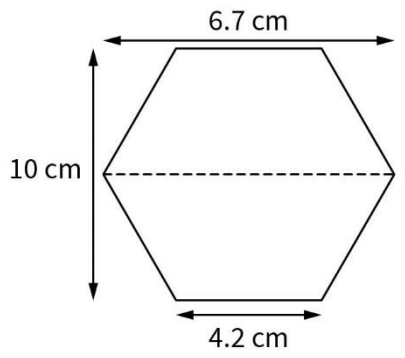


Oxford Revise | AQA GCSE Maths Foundation | Answers

Chapter 20 Perimeter, area, and volume

Question	Answer	Extra information	Marks
20.1 (a)	Line drawn with length 5.4 cm		1
20.1 (b)	The side measurements are 51 mm, 85 mm and 108 mm. The perimeter is 244 mm.	Correct length of any line Correct answer	1 1
20.2 (a)	Area = $\frac{1}{2} \times (6+9) \times 4 = 30\text{cm}^2$	Correct calculation Correct answer	1 1
20.2 (b)	Area = $\frac{1}{2} \times 6 \times 4 = 12\text{cm}^2$	Correct calculation Correct answer	1 1
20.2 (c)	Area = $25 \times 12 = 300\text{cm}^2$	Correct calculation Correct answer	1 1
20.3	Area = $6 \times 7 = 42\text{cm}^2$	Correct formula used Correct answer	1 1
20.4	Area of cross-section = $180 \div 20 = 9\text{cm}^2$		1
20.5	Volume = $40 = 2 \times 5 \times \text{height}$ Therefore, height = 4 cm Surface area = $2(2 \times 4) + 2(4 \times 5) + 2(5 \times 2) = 76\text{cm}^2$	Height of cuboid = 4 cm Method to find surface area 76 Answer including units	1 1 1 1

Question	Answer	Extra information	Marks
20.6	Length of rectangle = 12 cm	12 cm	1
	Perimeter = $2(6 + 12) = 36$ cm	Correct answer	1
20.7	$2 \times 125 + 2(x - 4) = 380$	Form an equation in x for the perimeter of the £5 note	1
	Solve to find that $x = 69$ mm	69	1
	Perimeter of £10 note = $2 \times 132 = 2 \times 69 = 402$ mm	Correct answer	1
20.8	The area of a kite A is given by $A = \frac{pq}{2}$, where p and q are the diagonals.	Correctly substituting $p = 4$ cm and $q = 9$ cm into kite area formula	1
	$A = \frac{4 \times 9}{2} = 18$ cm ²	Correct answer	1
20.9 (a)	Missing side length = $11 - 3 = 8$ m	Missing side length	1
	Perimeter = $4 + 8 + 5 + 8 + 11 = 36$ cm	Correct answer	1
20.9 (b)	Triangle area = $\frac{1}{2} \times 3 \times 4 = 6$ m ²	Area of the triangle	1
	Rectangle area = $4 \times 11 = 44$ m ²	Area of the rectangle	1
	Total area = 50 m ²	Correct answer	1

Question	Answer	Extra information	Marks
20.10	 <p>The hexagon can be divided into two identical trapeziums.</p> <p>Area of one trapezium = $\frac{1}{2} \times (4.2 + 6.7) \times 5 = 27.25$</p> <p>Area of hexagon = $2 \times 27.25 = 54.5 \text{ cm}^2$</p>	<p>Area of trapezium</p> <p>Correct answer</p> <p>Award full marks for any method that involves dividing the hexagon into triangles</p>	<p>1</p> <p>1</p>
20.11 (a)	Volume = $20 \times 30 \times 10 = 6000 \text{ mm}^3$	<p>$20 \times 30 \times 10$</p> <p>Correct answer</p>	1
20.11 (b)	<p>Surface area</p> <p>= $2[(20 \times 30) + (30 \times 10) + (10 \times 20)]$</p> <p>= 2200 mm^2</p>	<p>$2[(20 \times 30) + (30 \times 10) + (10 \times 20)]$</p> <p>Correct answer</p>	<p>1</p> <p>1</p>

Question	Answer	Extra information	Marks
20.12	Volume = $8 \times 25 = 200 \text{ m}^3$	200 Units included	1 1
20.13		$3xy$ or $2xy$ Correct answer, no matter how the shape is divided	1 1
20.14	$360 \div 24 = 15$ The polygon has 15 sides	Attempt to divide 360 by 24 Correct answer	1 1
20.15 (a)	False; 27 is 3-cubed		1
20.15 (b)	False; 2 and 6 are both factors of 12		1
20.15 (c)	True; 6 and 15 are the only triangular numbers		1