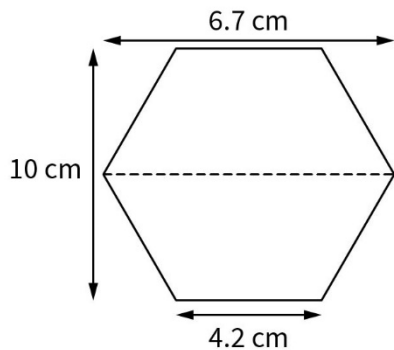


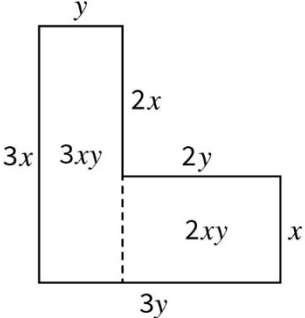
Oxford Revise | Edexcel GCSE Maths Foundation | Answers

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 Perimeter = $2(6 + 12) = 36$ cm	12 cm Correct answer	1 1
20.7	The area of a kite A is given by $A = \frac{pq}{2}$, where p and q are the diagonals. $A = \frac{4 \times 9}{2} = 18 \text{ cm}^2$	Correctly substituting $p = 4$ cm and $q = 9$ cm into kite area formula Correct answer	1 1
20.8 (a)	Missing side length = $11 - 3 = 8$ m Perimeter = $4 + 8 + 5 + 8 + 11 = 36$ cm	Missing side length Correct answer	1 1
20.8 (b)	Triangle area = $\frac{1}{2} \times 3 \times 4 = 6 \text{ m}^2$ Rectangle area = $4 \times 11 = 44 \text{ m}^2$ Total area = 50 m^2	Area of the triangle Area of the rectangle Correct answer	1 1 1

Question	Answer	Extra information	Marks
20.9	 <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>
20.10 (a)	Volume = $20 \times 30 \times 10 = 6000 \text{ mm}^3$	<p>$20 \times 30 \times 10$</p> <p>Correct answer</p>	1
20.10 (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
20.11	Volume = $8 \times 25 = 200 \text{ m}^3$	200 Units included	1 1
20.12		$3xy$ or $2xy$ Correct answer, no matter how the shape is divided	1 1
20.13	$360 \div 24 = 15$ The polygon has 15 sides	Attempt to divide 360 by 24 Correct answer	1 1
20.14 (a)	27		1
20.14 (b)	2 and 6		1
20.14 (c)	6 and 15		1