

Skill

Group A - Surface area of cuboids

Work out the surface area of the cuboids below:





Group B - Surface area of triangular, parallelogram and trapezoidal prisms

Work out the surface area of the prisms below:





Group C - Surface Area of Mixed Prisms

Work out surface area of each of the prisms below:





Applied

(a)

1)



- (b) The cuboid above will have to be painted. It takes the painter 1hr to paint every $8m^2$. How long will it take the painter to paint the entire cuboid?
- 2) (a) The surface area of this prism is $254cm^2$. Work out the value of *a*. Give your answer to 2.d.p.



3) (a) Work out the surface area of the prism below:



(b) Convert the surface area in (a) to m^2



Surface Area of Prisms - Exam Questions

1) (a) Work out the surface area of this trapezoidal prism.



(3)

(b) Convert the surface area is (a) to cm^2 .

(2) (5 marks)

2) (a) Work out the surface area of this prism.



.....(4)

(b) If the shape in (a) is enlarged by a scale factor of 2, what is the new surface area?

(2) (6 marks)



Surface Area of Prisms - Exam Questions

3) The surface area of the prism below is $120cm^2$. Calculate the value of *a*.



(4 marks)



	Question	Answer
	Skill Questions	
Group A	Work out: 1) 3cm 4cm	1) 136cm ²
	8cm 2) 5cm 3cm	2) 158 <i>cm</i> ²
	8cm 3) 7mm 6mm	3) 370 <i>cm</i> ²
	4) 10 mm	4) 556 <i>cm</i> ²
	5) 17cm 14cm	5) 1406 <i>cm</i> ²
	6) 12cm 9cm 8cm	6) 552 <i>cm</i> ²



















	Question	Answer
	Applied Questions	
1)	a) Work out the surface area of the cuboid below: 6m 8m 10m	a) 376m ²
	b) The cuboid above will have to be painted. It takes the painter $1hr$ to paint every $8m^2$. How long will it take the painter to paint the entire cuboid?	b) 47 hours
2)	The surface area of this prism is $254cm^2$. Work out the value of a . Give your answer to 2 d.p. acm 9cm 7cm	4cm
3)	a) Work out the surface area of the prism below: $4cm \frac{5cm}{10cm}$ b) Convert the surface area in (a) to m^2	a) $132cm^2$



Surface Area of Prisms - Mark Scheme

		Question	Answer	
		Exam Questions		
1)	(a)	Work out the surface area of this trapezoidal prism. 6m $7m$ $8m$ $10m$ $10m$	(a) Area of trapezium = $\frac{1}{2}$ (7)(6 + 10) (2) = $112m^2$ (1) SA = (8)(10) + (6)(10) + (8)(10) + (10)(10) + 112 $SA = 432m^2$	(1)(1)(1)
	(b)	Convert the surface area is (a) to cm^2 .	(b) 432×100^2 $4320000 cm^2$	(1) (1)
2)	(a)	Work out the surface area of this prism. 7mm $5mm$ $10mm$	(a) Area of L Shape = $(7)(5) + (7)(3)$ Area of L Shape = $56mm^2 \times 2$ Area of L Shapes = $112mm^2$ SA = 112 + (10)(12) + (5)(12) + (7)(12) + (2)(12) + (3)(12) + (7)(12) $SA = 520mm^2$	(1) (1) (1) (1)
	(b)	If the shape in (a) is enlarged by a scale factor of 2, what is the new surface area?	(b) $SF^2 = 4$ 520 × 4 = 2080mm ²	(1) (1)
3)	(a)	The surface area of the prism below is $120cm^2$. Calculate the value of <i>a</i> . $4cm \frac{5cm}{a}$	(a) Area of Triangles = $2(4 + 3) \div 2$ Area of Triangles = $12cm^2$ 120 - 12 = 108 12a = 108 a = 9cm	 (1) (1) (1) (1)

