Multiple choice section

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Answer | D | B | D | A | B | C | B | A |

Question 1 [6.1]

D

45 cm = 450 mm

Question 2 [6.2]

B

Perimeter

= 2 × 9 + 2 × 11

= 18 + 22

= 40 m

Question 3 [6.6]

D

*V* = 5 cm3

Question 4 [6.3]

A

100 = 10 × 10

length = 10 m

Question 5 [6.3]

B

cm2

Question 6 [6.3]

C

A = 7 × 8 = 56 cm2

Question 7 [6.4]

B

A = 17 × 3 = 51 cm2

Question 8 [6.5]

**A**

A = bh

=  × 10 × 6 = 30 cm2

Multiple-choice total marks: 8

Short answer section

Question 9 3 marks [6.1, 6.2, 6.3]

(a) To convert from a larger unit of measurement to a smaller unit, you *multiply.*

(b) The area of a rectangle is calculated by multiplying the *length* by the width.

(c) The perimeter of a square is calculated by *multiplying* its length by 4.

Question 10 3 marks [6.1]

(a) 23 km = 23 000 m

(b) 1009 mm = 100.9 cm

(c) 999 mm = 0.999 m  
Convert to cm 999 mm = 99.9 cm, then convert to m 99.9 cm = 0.999 m

Question 11 1 mark [6.1]

2 375 000 m = 2 375 km

Question 12 4 marks [6.2]

(a) P = 2l + 2w  
= 2 × 7 + 2 × 2  
= 14 + 4  
= 18 cm

(b) P = 4l  
= 4 × 160  
= 640 mm

Question 13 2 marks [6.2]

State the lengths of all sides, including those not given.

6 + 8 + 8 + 12 + 2 + 4 = 40 cm

Question 14 2 marks [6.3]

|  |  |
| --- | --- |
| (a) A = lw = 3 × 3 = 9 cm2 | (b) A = lw = 3 × 8 = 24 cm2 |

Question 15 2 marks [6.3]

A = lw

= 7 × 3

= 21 cm2

Question 16 2 marks [6.3]

A = l2

= 0.8 × 0.8

= 0.64 cm2

Question 17 2 marks [6.4]

A = bh (use the perpendicular height)

= 12 × 2

= 24 cm2

Question 18 2 marks [6.5]

A = bh

=  × 57 × 35

= 997.5 cm2

Question 19 1 mark [6.6]

By counting the number of cubes:

Top layer = 10

Remaining cubes = 4

V = 10 + 4 = 14 cm3

Question 20 2 marks [6.6]

V = l × w × h

= 5 × 6 × 7

= 210 cm3

Question 21 3 marks [6.6]

V = l × w × h  
108 = 12 × 3 × h  
108 = 36 × h  
h = 108 ÷ 36  
h = 3 cm

Rectangular prism sketched should have dimensions labelled as:

12 cm, 3 cm, 3 cm

Short answer total: 29

Extended answer section

Question 22 4 marks [6.5]

Area of large square = lw

= 424 × 424 = 179 776 mm2

Area of small square = lw

= 200 × 200 = 40 000 mm2

shaded area = area of outer square – area of small square

= 179 776 – 40 000

= 139 776 cm2

Question 23 4 marks [6.5]

Divide the composite shape into 2 separate shapes using horizontal lines.  
Area rectangle

= 80 × 30

= 2400 cm2  
Triangle height

= 70 – 30

= 40 cm  
Triangle area

=  × 80 × 40

= 40 × 40

= 1600 cm2  
Total area

= 2400 + 1600  
= 4000 cm2

Extended answer total: 8

TOTAL test marks: 45