Test Yourself Chapter 13 Surface area and volume

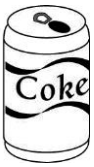
Name: _____

All Multiple Choice

1 The best estimate for the length of the line drawn below is:

A 2 cm
B 5 cm
C 10 cm
D 1 m

2 The best estimate for the capacity of this can of soft drink is:

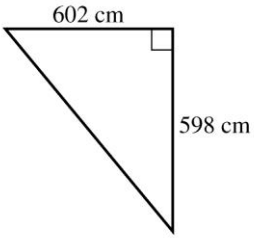


A 50 mL
B 100 mL
C 400 mL
D 1 L

3 What is 1.3 cm equivalent to?
A 0.13 mm
B 0.13 m
C 0.013 mm
D 0.013 m

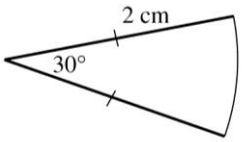
4 A large field has an area of 0.12 square kilometres. Its area in square metres is:
A 0.00 000 012 m^2
B 120 m^2
C 120 000 m^2
D 12 000 000 m^2

5 The length of the missing side of the right-angled triangle in the figure below is:



A 749 cm
B 1200 cm
C 849 cm
D 949 cm

6 The figure below represents the sector of a circle. Its angle is 30°. If the radius is 2 cm, then the area of the sector (in cm^2) is:



A $\frac{\pi}{3}$

B $\frac{\pi}{4}$

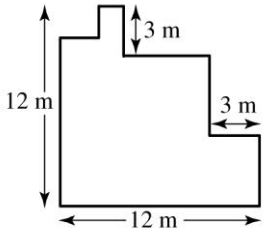
C $\frac{\pi}{6}$

D $\frac{\pi}{8}$

7 A ladder 5.1 m long is required to reach a height 4.5 m up a vertical wall. Assume the ground is horizontal. The distance the foot of the ladder must be placed from the base of the wall is:

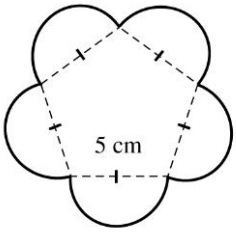
A 2.4 m
B 1.4 m
C 0.9 m
D 1.9 m

8 The perimeter of the shape in the figure below is:



A 45 m
B 48 m
C 42 m
D 51 m

9 The perimeter of the shape in the figure below is closest to:

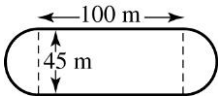


A 39 cm
B 31 cm
C 33 cm
D 37 cm

10 A rectangular paddock, 402 m by 788 m, is fenced with 6 strands of wire. The total length of wire needed is:

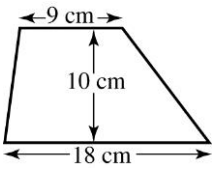
A 1785 m
B 3570 m
C 7140 m
D 14 280 m

11 The length around the athletic track depicted in the figure below is closest to:



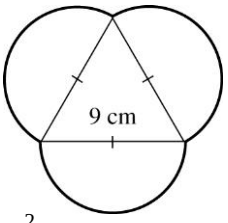
A 401 m
B 381 m
C 361 m
D 341 m

12 The area of the shape in the figure below is:



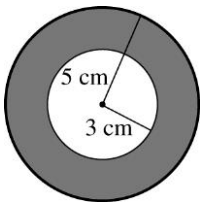
A 135 cm^2
B 180 cm^2
C 210 cm^2
D 162 cm^2

13 The area of the shape in the figure below is:



A 140 cm^2
B 130 cm^2
C 120 cm^2
D 110 cm^2

14 The shaded area in the figure below is closest to:

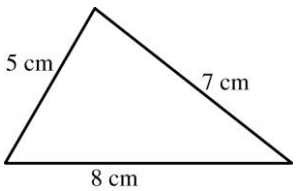


A 20 cm^2
B 40 cm^2
C 50 cm^2
D 60 cm^2

15 A piece of aluminium 144 cm by 36 cm has 36 circles of diameter 12 cm cut from it. The area of the aluminium left over is closest to:
A 1210 cm^2
B 1110 cm^2
C 1010 cm^2
D 910 cm^2

16 A 4-m wide pathway is constructed around the outside of a rectangular sporting stadium 200 m by 250 m. The area of the pathway is closest to:
A 3460 m^2
B 3560 m^2
C 3660 m^2
D 3760 m^2

17 The area of the triangle drawn below is closest to:

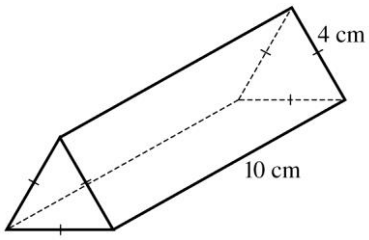


A 15 cm^2
B 16 cm^2
C 17 cm^2
D 20 cm^2

18 The surface area of a cube of side length 13 cm is closest to:
A 1100 cm^2
B 700 cm^2
C 600 cm^2
D 1000 cm^2

19 The surface area of a spherical weather balloon with diameter 86 cm is closest to:
A 330 000 cm^2
B 93 000 cm^2
C 23 000 cm^2
D 12 000 cm^2

20 The figure below represents a triangular prism. The area of each triangular face is approximately 7 cm^2. The total surface area is:

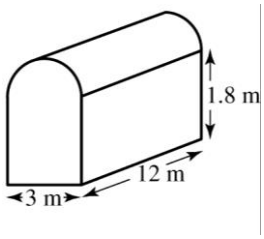


A 14 cm^2
B 49 cm^2
C 70 cm^2
D 134 cm^2

21 What is 50.5 litres equivalent to?
A 505 cm^3
B 5050 cm^3
C 50 050 cm^3
D 50 500 cm^3

22 The surface area of a closed cone of diameter 9.9 cm and slant height 9.1 cm is:
A 591 cm^2
B 218 cm^2
C 318 cm^2
D 191 cm^2

23 A green house is to be constructed with the dimensions as shown in the figure below. The area of plastic required to cover the walls and roof of the green house is closest to:



A 100 m^2
B 120 m^2
C 95 m^2
D 130 m^2

24 The volume of a rectangular prism 40 cm by 30 cm by 20 cm is:
A 5200 cm^3
B 12 000 cm^3
C 10 000 cm^3
D 24 000 cm^3

25 The volume of a spherical beach ball of diameter 45 cm is closest to:
A 48 000 cm^3
B 380 000 cm^3
C 6400 cm^3
D 25 000 cm^3

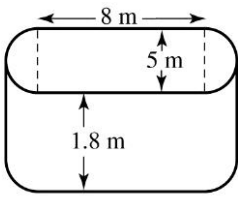
26 A box 20 cm × 20 cm × 20 cm has a volume equivalent to:
A 2 litre
B 4 litres
C 8 litres
D 16 litres

27 The volume of a cylinder whose radius and height are both 1 cm is:
A π cm^3
B 2π cm^3
C 3π cm^3
D 4π cm^3

28 The volume of a cone with diameter of 9 cm and vertical height of 11 cm is closest to:
A 933 cm^3
B 633 cm^3
C 433 cm^3
D 233 cm^3

29 Five balls, each with diameter 5 cm, are placed in a cylinder. The least amount of unused space inside the cylinder is closest to:
A 130 cm^3
B 140 cm^3
C 150 cm^3
D 160 cm^3

30 The volume of water required to fill the swimming pool depicted in the figure below is:



A 107 kL
B 97 kL
C 87 kL
D 77 kL

..\MQ9 NSW 5_3 TestYourself Ans\MQ9 5_3 Ch13 TY ans.doc