

Key

Formulas:

Area of Rectangle: $b \times h$

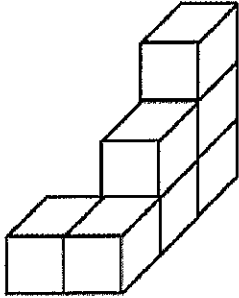
Area of Triangle: $b \times h \div 2$

Area of Circle: $3.14 \times r^2$

Circumference: $3.14 \times d$

Name _____

___ 1. This composite objects if made using 1 cm cubes. Determine its surface area



a. 29 cm²

b. 28 cm²

c. 24 cm²

d. 26 cm²

___ 2. How many meters (m) is 45.6 km?

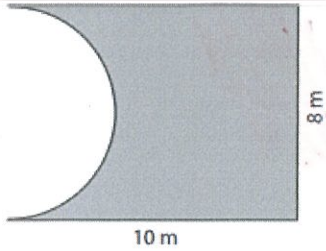
a. 4560

b. 0.0456

c. 45600

d. 456000

3. Find the area of the following compound shape. (use 3.14 for Pi)

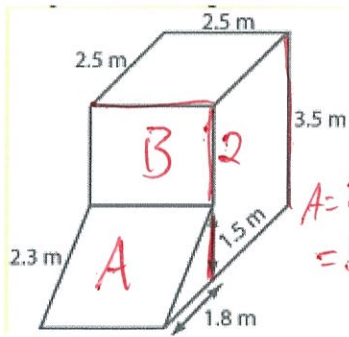


- a. 54.88 m²
- b. 83.65 m²

- c. 80 m²
- d. 60.73 m²

4. The object is decomposed into a rectangular prism and triangular prism.

Calculate the area



A

Front	Sides	Bot
$A = 2.3 \times 2.5 = 5.75 \text{ cm}^2$	$A = \frac{1.8 \times 1.5}{2} = 1.35$ $\times 2 = 2.7 \text{ cm}^2$	$A = 1.8 \times 2.5 = 4.5 \text{ cm}^2$

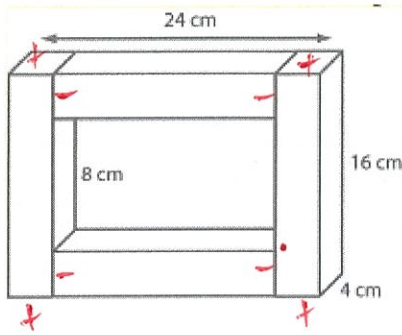
$$5.75 + 2.7 + 4.5 + 12.5 + 17.5 + 8.75 + 5 = \boxed{56.7 \text{ cm}^2}$$

B

Top/Bot	Sides	Back	Front
$A = 2.5 \times 2.5 = 6.25$ $\times 2 = 12.5 \text{ cm}^2$	$A = 3.5 \times 2.5 = 8.75$ $\times 2 = 17.5 \text{ cm}^2$	$A = 3.5 \times 2.5 = 8.75 \text{ cm}^2$	$A = 2 \times 2.5 = 5 \text{ cm}^2$

Don't need to subtract overlap because I didn't add top/bot

5. What is the total area of this shape?



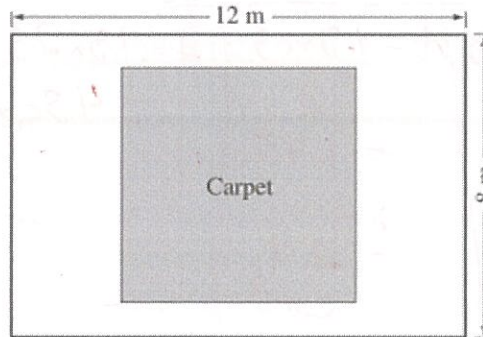
$$\begin{array}{l} \text{Left} \\ \hline 16 \times 4 \times 4 \\ \hline 256 \times 3 \\ = 512 \end{array}$$

$$\begin{array}{l} \text{Top} \\ \hline 24 \times 4 \\ \hline 16 \times 4 \times 4 \\ \hline 512 \end{array}$$

~~16 x 4~~

$$1024 \text{ cm}^2$$

6. A square carpet covers 37.5% of the floor area of a rectangular room, as shown below. What is the Side length of the carpet shown below?



6. a. 7 m

b. 6 m

c. 5 m

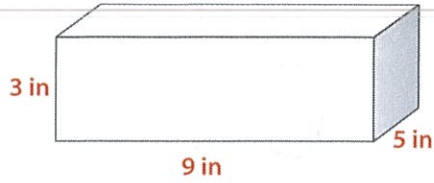
d. 4 m

$$A = 8 \times 12 = 96 \text{ m}^2$$

$$37.5\% \text{ of } 96 = 0.375 \times 96 = 36$$

$$\sqrt{36} = 6$$

7. Calculate the surface area of this rectangular prism.



$$A = 9 \times 5$$

$$= 45 \times 2$$

$$= 90$$

$$A = 9 \times 3$$

$$= 27$$

$$\times 2$$

$$= 54$$

$$A = 3 \times 5$$

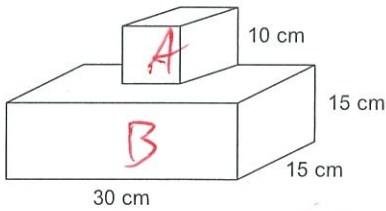
$$= 15 \times 2$$

$$= 30$$

~~90~~

$$\text{Total} = 174 \text{ in}^2$$

8. This figure is a CUBE on top of a rectangular prism. Calculate the **total surface area** of the following figure



$$A = 500 + 2250 - 100 \text{ cm}^2$$

$$= 2650 \text{ cm}^2$$

A

B

$$A = l \times w \times 5$$

$$= 10 \times 10 \times 5$$

$$= 500 \text{ cm}^2$$

$$A = 30 \times 15 \quad \text{F/B}$$

$$= 450 \times 2$$

$$= 900 \text{ cm}^2$$

$$A = 15 \times 15 \quad \text{Sides}$$

$$= 225 \times 2$$

$$= 450$$

$$A = 15 \times 30 \quad \text{T/Bot}$$

$$= 450 \times 2$$

$$= 900$$

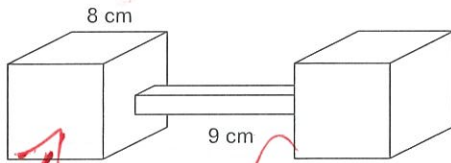
$$= 2250 \text{ cm}^2$$

9. This object is composed of two identical cubes joined by a right rectangular prism that look like Thor's dumbbells.

The edge length of **each cube is 8 cm**.

The **rectangular prism is 9 cm long** and has **square ends of side length 3 cm**.

Determine the **surface area** of the object.



$$A = 8 \times 8 \times 6 = 384$$
$$\times 2 = 768 \text{ cm}^2$$

$$A = 9 \times 3 \times 4$$
$$= 108 \text{ cm}^2$$

$$A = 768 + 108 - (3 \times 3 \times 2)$$

$$= 768 + 108 - 18$$

$$= 858 \text{ cm}^2$$