

To calculate ...

Surface area



1. Identify all sides or faces.

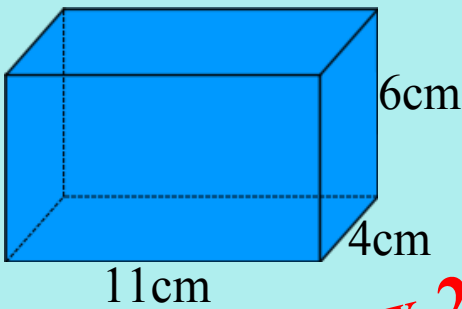


2. Calculate the area of each face.



3. Add all areas together.

Calculate the surface area of the following 3D-Shape.



Top & Bottom (will always be the same)
Front & Back (will always be the same)
Side & Side (will always be the same)

Top & Bottom x 2

$$\begin{aligned} A &= 2(L \times W) \\ A &= 2(11 \times 4) \\ A &= 2(44) \\ A &= 88 \text{ cm}^2 \end{aligned}$$

Front & Back x 2

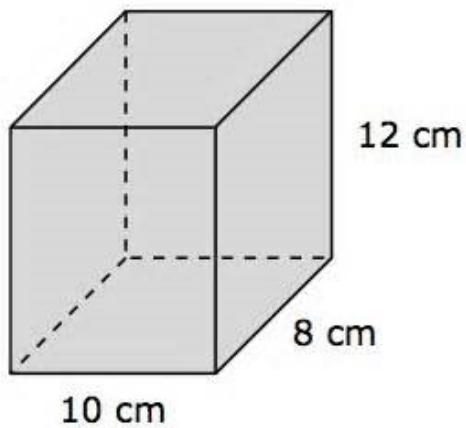
$$\begin{aligned} A &= 2(L \times W) \\ A &= 2(11 \times 6) \\ A &= 2(66) \\ A &= 132 \text{ cm}^2 \end{aligned}$$

Sides x 2

$$\begin{aligned} A &= 2(L \times W) \\ A &= 2(4 \times 6) \\ A &= 2(24) \\ A &= 48 \text{ cm}^2 \end{aligned}$$

Total Surface Area

$$\begin{array}{r} 88 \text{ cm}^2 \\ + 132 \text{ cm}^2 \\ \hline 48 \text{ cm}^2 \\ \hline 268 \text{ cm}^2 \end{array}$$

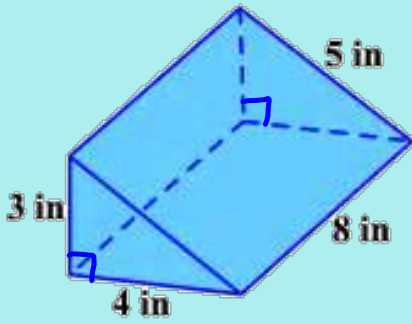


T & B $10 \times 8 = 80$
 $\frac{\times 2}{160 \text{ cm}^2}$

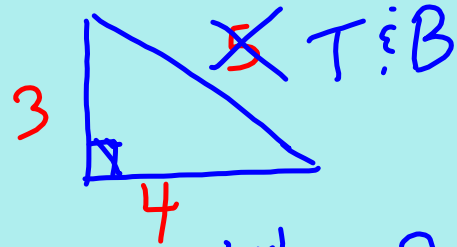
F & B $10 \times 12 = 120$
 $\frac{\times 2}{240 \text{ cm}^2}$

Sides $8 \times 12 = 96$
 $\frac{\times 2}{192 \text{ cm}^2}$

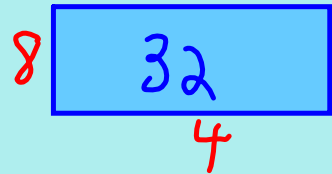
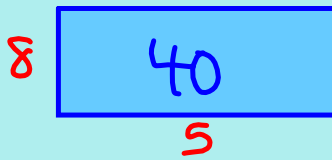
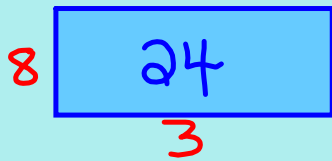
$$\begin{array}{r} 160 \\ + 240 \\ \hline 192 \\ \hline 592 \text{ cm}^2 \end{array}$$



Top &
Bottom



Three Sides



$$\begin{array}{r}
 24 \\
 40 \\
 32 \\
 \hline
 108 \text{ in}^2
 \end{array}$$

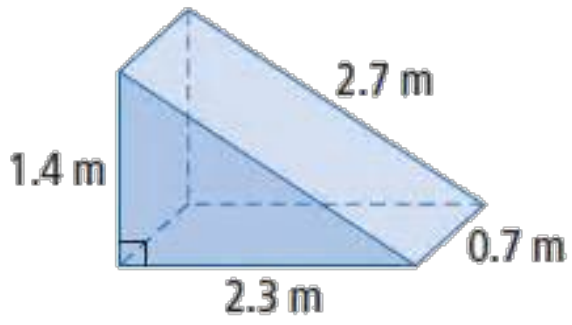
$$\frac{b \times h}{2} \times 2$$

$$\left(\frac{4 \times 3}{2}\right) \times 2$$

$$\frac{12}{2} \times 2$$

$$6 \times 2$$

$$= 12 \text{ in}^2$$



Calculate the surface area of the following 3D-Shape.

This is special!



$$SA = 2\pi r^2 + 2\pi rh$$

$$SA = 2(3.14)(2)^2 + 2(3.14)(2)(21)$$

$$SA = 2(3.14)(4) + 263.76$$

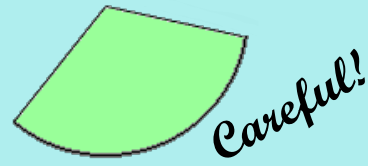
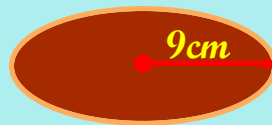
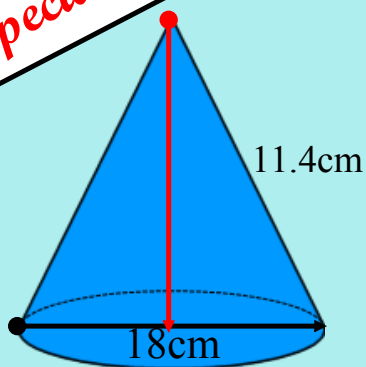
$$SA = 25.12 + 263.76$$

$$SA = 288.91\text{cm}^2$$

$$288.88$$

Calculate the surface area of the following 3D-Shape.

This is special!



$$A = \pi r s$$

$$SA = \pi r^2 + \pi r s$$

$$SA = (3.14)(9)^2 + (3.14)(9)(11.4)$$

$$SA = (3.14)(81) + 322.164$$

$$SA = 254.34 + 322.164$$

$$SA = 576.504 \text{ cm}^2$$

Attachments

Methods_of_Determining_Probability.asf

The_Many_Sided_World_of_Geometry__Program_6__Figuring_Out_Area.asf