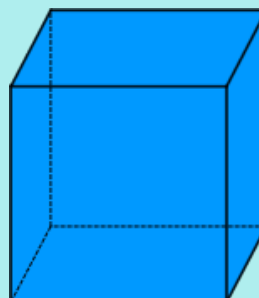


To calculate
SURFACE AREA
you must first
recognize every
side or face.



Draw the faces
of this
3D-figure



To calculate
SURFACE AREA
you must first
recognize every
side or face.



The faces of this 3D-figure are:

front

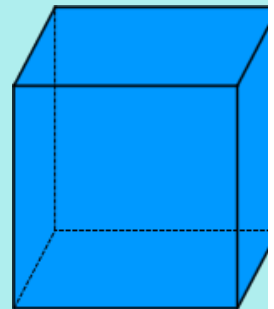
back

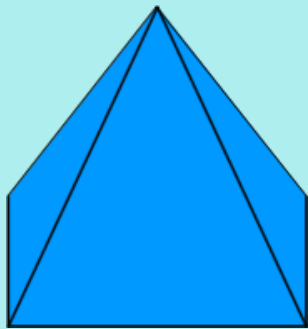
side

side

top

bottom

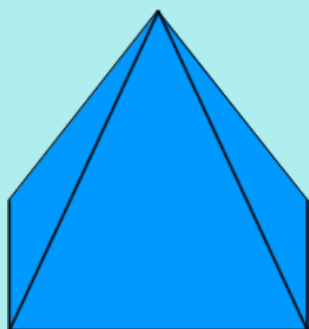




*Draw the faces
of this
3D-figure*



The faces of this 3D-figure are:

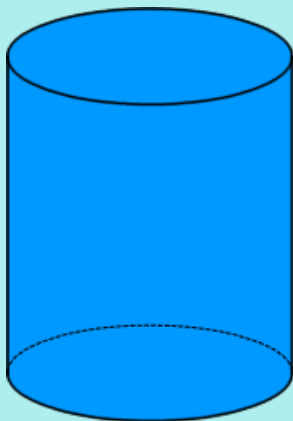


4 sides

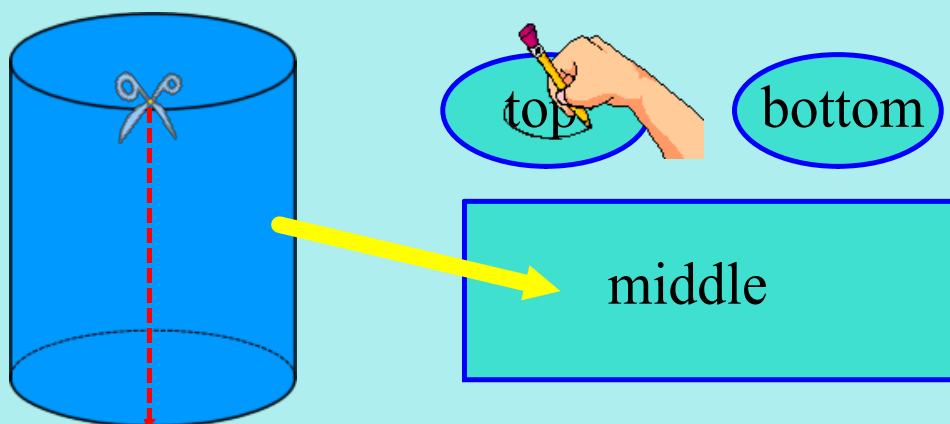


base (bottom)

*Draw the faces
of this
3D-figure*



The faces of this 3D-figure are:



To calculate ...

Surface area



1. Identify all sides or faces.

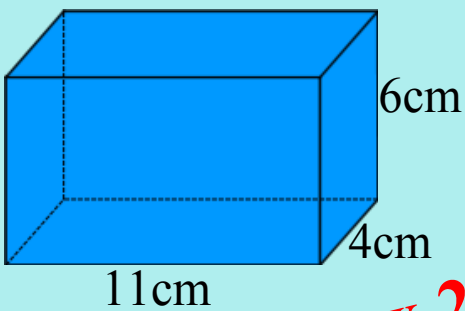


2. Calculate the area of each face.



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)

11cm

Top & Bottom *x 2*

$$A = 2(L \times W)$$

$$=$$

$$=$$

$$=$$

Front & Back *x 2*

$$A = 2(L \times W)$$

$$=$$

$$=$$

$$=$$

Sides *x 2*

$$A = 2(L \times W)$$

$$=$$

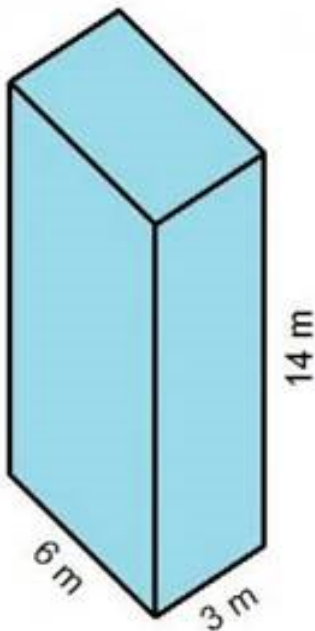
$$=$$

$$=$$

Total Surface Area



Calculate Surface Area



T & B

$$3 \begin{array}{|c|} \hline \square \\ \hline \end{array} \times 2 \quad (3 \times 6) \times 2$$

$$18 \times 2 = 36 \text{ m}^2$$

F & B

$$14 \begin{array}{|c|} \hline \square \\ \hline \end{array} \times 2 \quad (14 \times 6) \times 2$$

$$84 \times 2 = 168 \text{ m}^2$$

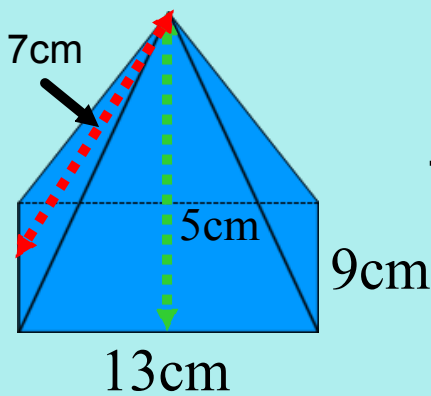
Sides

$$14 \begin{array}{|c|} \hline \square \\ \hline \end{array} \times 2 \quad (3 \times 14) \times 2$$

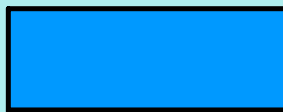
$$42 \times 2 = 84 \text{ m}^2$$

$$\begin{array}{r} 36 \\ 168 \\ 84 \\ \hline 288 \text{ m}^2 \end{array}$$

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



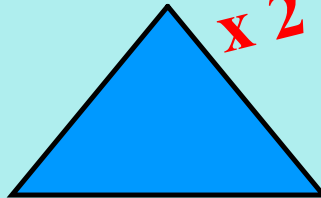
Bottom



$$A = L \times W$$

=

Front & Back

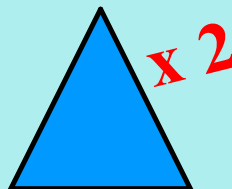


$$A = 2 \left(\frac{b \times h}{2} \right)$$

=

=

Sides



$$A = 2 \left(\frac{b \times h}{2} \right)$$

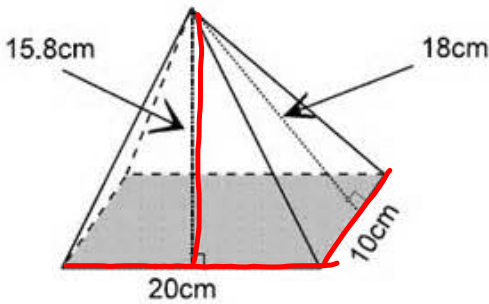
=

=

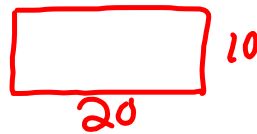
Total Surface Area =

=

Calculate Surface Area

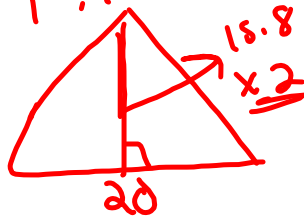


Bottom



$$20 \times 10 = 200 \text{ cm}^2$$

Front

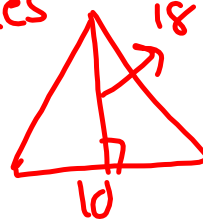


$$\left(\frac{b \times h}{2}\right) \times 2$$

$$\left(\frac{20 \times 15.8}{2}\right) \times 2$$

$$= 316 \text{ cm}^2$$

Sides



$$\left(\frac{b \times h}{2}\right) \times 2$$

$$\left(\frac{10 \times 18}{2}\right) \times 2$$

$$\left(\frac{180}{2}\right) \times 2$$

$$= 180 \text{ cm}^2$$

$$\begin{array}{r} 200 \\ 316 \\ \hline 180 \\ \hline 696 \text{ cm}^2 \end{array}$$

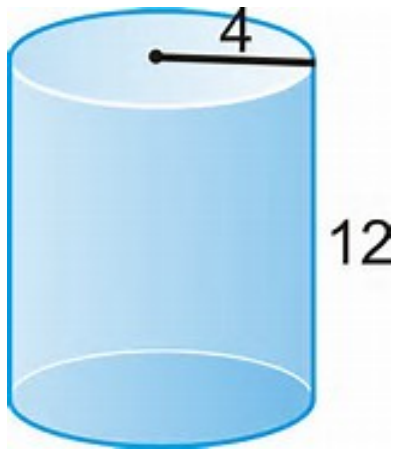
Calculate the surface area of the following 3D-Shape.

This is special!



$$\begin{aligned} SA &= 2\pi r^2 + 2\pi rh \\ &= 2(3.14)(2)^2 + 2(3.14)(2)(21) \\ &= 2(3.14)(4) + 263.76 \\ &= 25.12 + 263.79 \\ &= 288.91\text{cm}^2 \end{aligned}$$

Calculate Surface Area



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

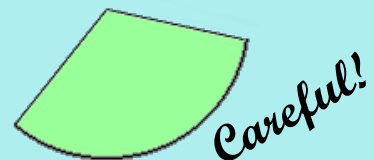
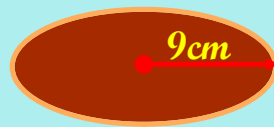
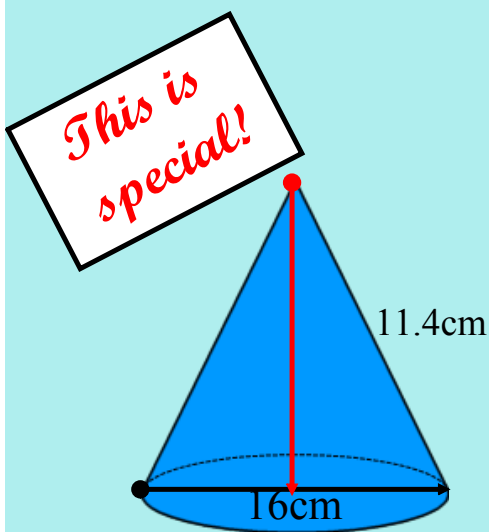
$$SA = 2(3.14)(4)^2 + 2(3.14)(4)(12)$$

$$SA = 2(3.14)(16) + 301.44$$

$$SA = 100.48 + 301.44$$

$$SA = 401.92$$

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



$$A = \pi r s$$

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

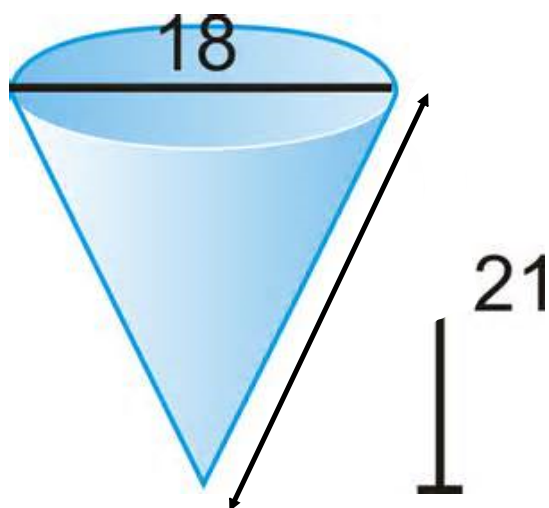
$$SA = (3.14)(8)^2 + (3.14)(8)(11.4)$$

$$SA = (3.14)(64) + 286.368$$

$$SA = 200.96 + 286.368$$

$$SA = 487.328 \text{ cm}^2$$

Calculate Surface Area



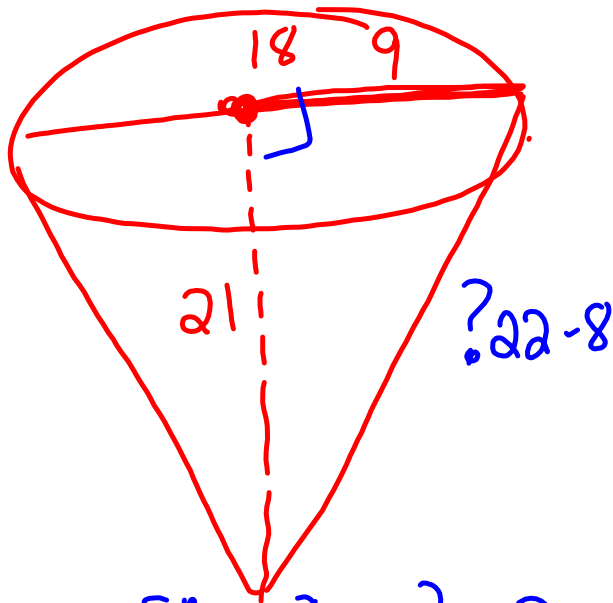
$$SA = \pi r^2 + \pi r s$$

$$SA = (3.14)(9)^2 + (3.14)(9)(21)$$

$$SA = (3.14)(81) + 593.46$$

$$SA = 254.34 + 593.46$$

$$SA = 847.8$$



$$a^2 + b^2 = c^2$$

$$21^2 + 9^2 = c^2$$

$$441 + 81 = c^2$$

$$\sqrt{522} = \sqrt{c^2}$$

$$c = 22.8$$

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

$$SA = (3.14)(9)^2 + (3.14)(9)(22.8)$$

$$SA = (3.14)(81) + 644.33$$

$$SA = 254.34 + 644.33$$

$$SA = 898.67$$

Attachments

Methods_of_Determining_Probability.asf

The_Many_Sided_World_of_Geometry__Program_6__Figuring_Out_Area.asf