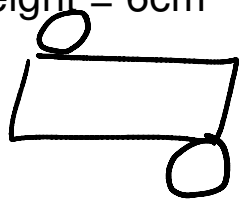
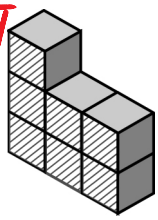
Station 1

a) Use the formula to calculate the total surface area of the cylinder to the nearest hundredth of a centimetre. Draw a net. Use 3.14 for π.

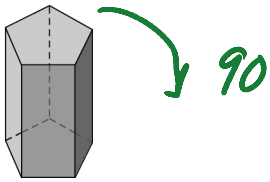
Radius = 5cm
Height = 6cm



answer: $2\pi r^2 + 2\pi rh$
$= 2(3.14)(5)^2 + 2(3.14)(5)(6)$
$= 157 + 188.4$
$= 345.4\text{cm}^2$



b) Sketch the top, front, and side views of this solid.

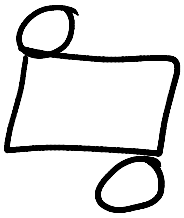


Sketch the top, front, and side views of this solid.

If you turn the polyhedron from #3 90° degrees counterclockwise, how would the three views change? Sketch and label each new view.

Station 2

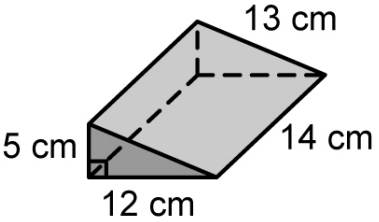
Calculate the surface area of the label on a can of soup with the dimensions. Draw a net. Use 3.14 for π.

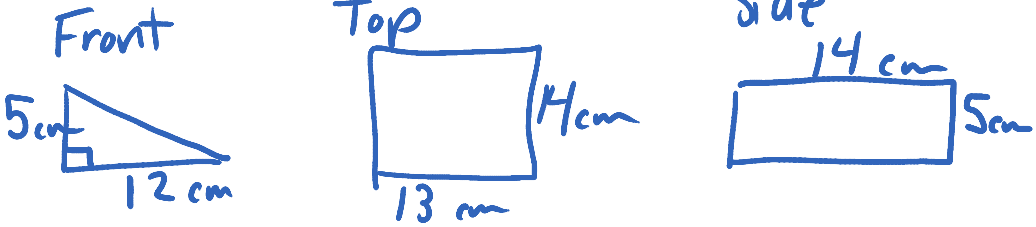


Height = 11cm
Diameter = 6cm

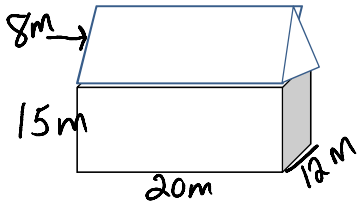
$A = h \times 2\pi r$
$= 11 \times 2(3.14)(3)$
$= 207.24\text{cm}^2$

b) Draw and label the measurements of the three views of this triangular prism.





Station 3



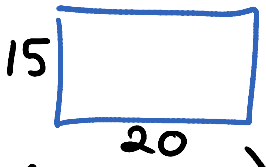
Rahim's dad wants to paint the outside of his garage, including the roof.

a) How many sides of the garage need to be painted? 4

b) Name the two shapes that make up the front and the back side of the garage. square and triangle

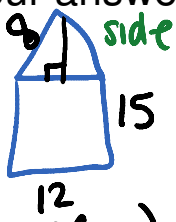
c) Calculate the total surface area that needs to be painted. Show your work. Round your answer to the nearest tenth of a metre.

Front + back



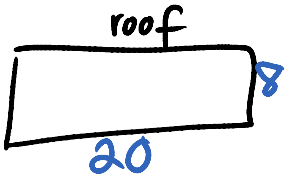
$A = 2(l \times w)$
$= 2(15 \times 20)$
$= 600\,m^2$

side +



$A = 2(l \times w) + 2(b \times h \div 2)$
$= 2(12 \times 15) + 2(12 \times 5.3 \div 2)$
$= 360 + 63.6$
$= 423.6\,m^2$

roof



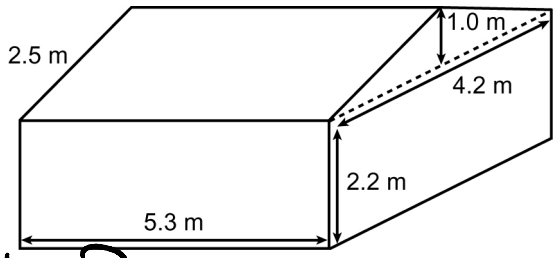
$A = 2(l \times w)$
$= 2(20 \times 8)$
$= 320\,m^2$

$8^2 - 6^2 = a^2$
$64 - 36 = a^2$
$28 = a^2$
$a = 5.3$

$A_T = 320 + 423.6 + 600$
$= 1343.6\,m^2$

Station 4

Calculate the total surface area



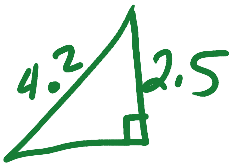
Rectangular prism

$A = 2(5.3 \times 2.2 + 2.5 \times 5.3 + 2.2 \times 2.5)$
$= 2(11.66 + 13.25 + 5.5)$
$= 2(30.35)$
$= 60.7\,m^2$

Triangular Prism

$A = 2(b \times h \div 2)^* + l \times w + l \times w + l \times w$
$= 2(3.37 \times 2.5 \div 2) + (2.2 \times 4.2) + (1.0 \times 3.37) + (2.5 \times 2.2)$
$= 8.425 + 9.24 + 3.37 + 5.5$
$= 26.535\,m^2$

*

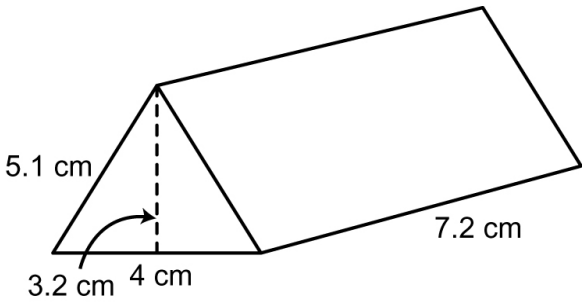


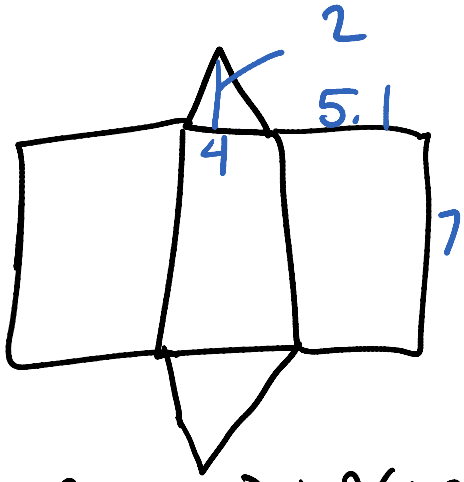
$4.2^2 - 2.5^2$
$= 3.37$

$A_T = 26.535 + 60.7$
$= 87.235\,m^2$

Station 5

a) Calculate the total surface area:



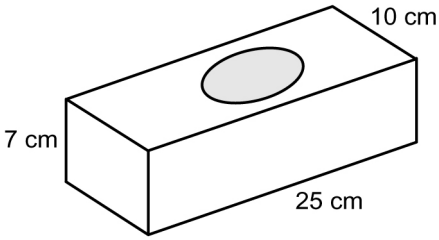


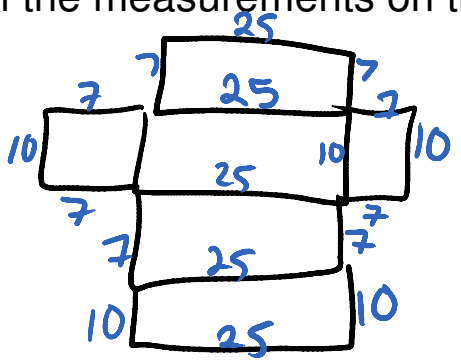
$A = 2(5.1 \times 7) + 2(4 \times 2 \div 2) + 4 \times 7$

$= 71.4 + 8 + 28$

$= 107.4\ cm^2$

b) Draw the net for the object. Label the measurements on the net. Find the total Surface Area.





Station 6

Solve a Burning Question (on the whiteboard) that has not been solved yet