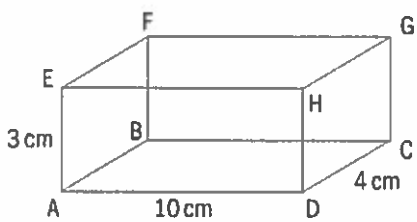
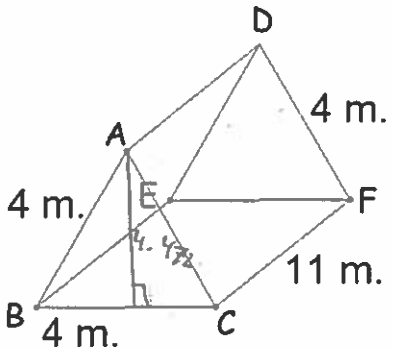
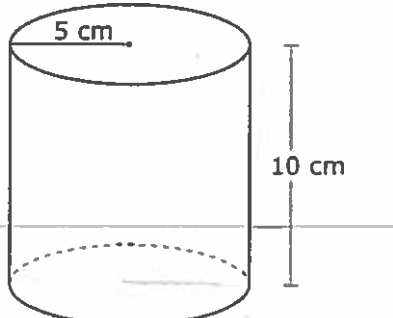
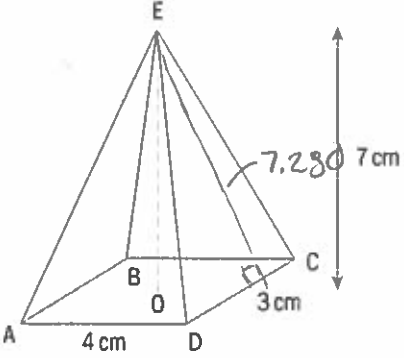
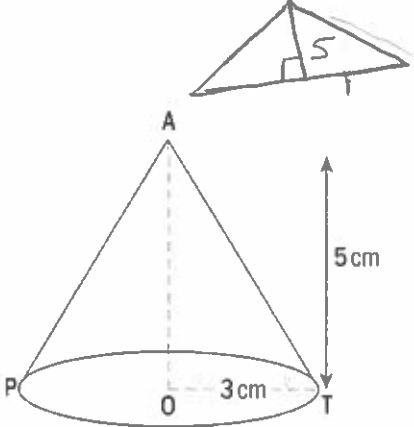
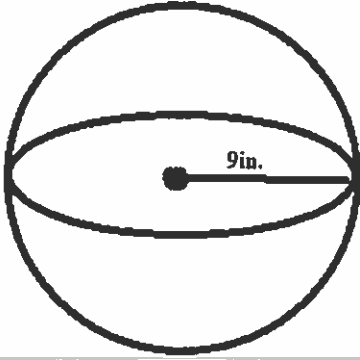


10.4 Surface Area of 3D Solids

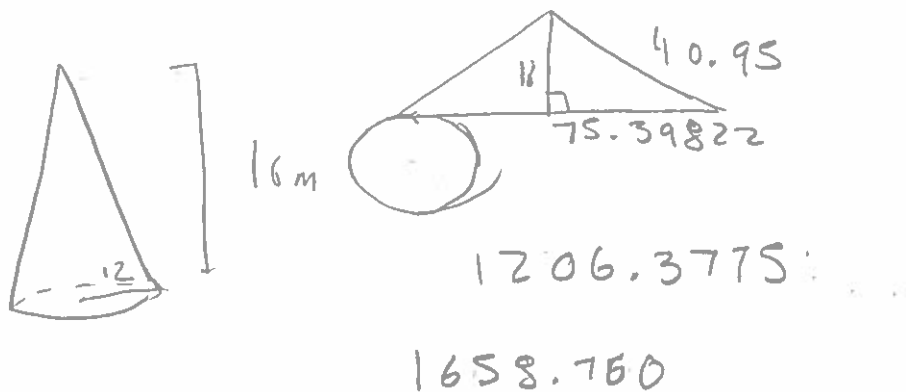
Solid	Fully Labeled Net → Surface Area
	$3 \cdot 10 = 30 \cdot 4$ $120 + ((4 \cdot 3) \cdot 2)$ $136 \text{ cm}$
	$(4 \cdot 11) \cdot 2 = 88 + 44$ $132 + 17.8854$ $149.885$ $\text{then } 150 \text{ m}$
	$157.0796$ $+ ((10 \cdot (2\pi \cdot 5)))$ $\downarrow$ $471.238$ $\text{then } 471 \text{ cm}$

Solid	Fully Labeled Net → Surface Area <sup>2</sup>
	$43.680659 + (4 \cdot 3)$ $55.680$ $55.7 \text{ cm}^2$
	$47.12388 + (\pi \cdot 3^2)$ $75.398$ $75.4 \text{ cm}^2$
	<p>Formula</p>

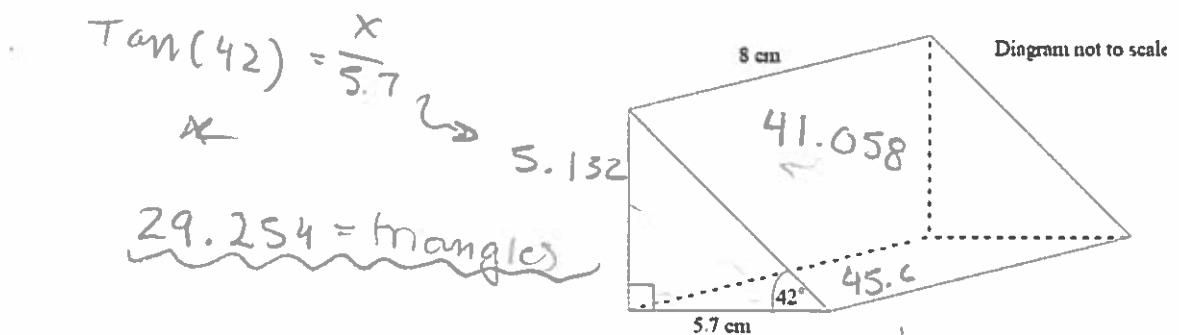
IB Math Studies Year 2

10.4 Surface Area of 3D Solids

1. The radius of a cone is 12 cm and the height is 16 cm. Find the surface area of the cone.



2. Find the surface area of the following prism.



$$61.359 + 41.058 + 45.6 = 148.017$$

$$177.271$$

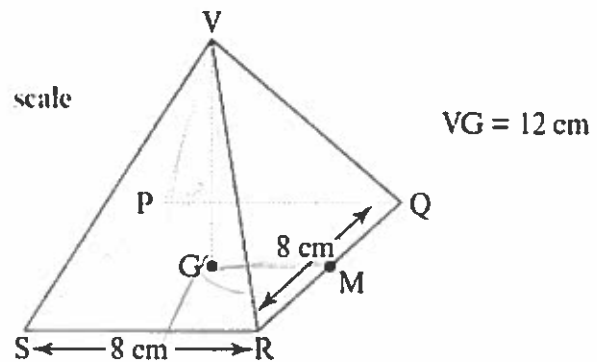
$$177.3 \text{ cm}$$

$$177 \text{ cm}$$

3. In the diagram below, PQRS is the square base of a solid right pyramid with vertex V. The sides of the square are 8 cm, and the height VG is 12 cm. M is the midpoint of QR.

a) Write down the length of GM.

b) Calculate the length of VM.



c) Find the total surface area of the pyramid.

d) Find the angle between the face VQR and the base of the pyramid.