

# Nets: Surface Area of Composite Objects

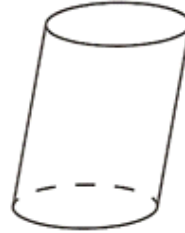
February 20, 2015 4:42 PM

Let us now look at other three dimensional figures in geometry; the right rectangular prism, right triangular prism and the right cylinder. We use the word "right" to distinguish geometric figures that are perpendicular to the base.

Example:

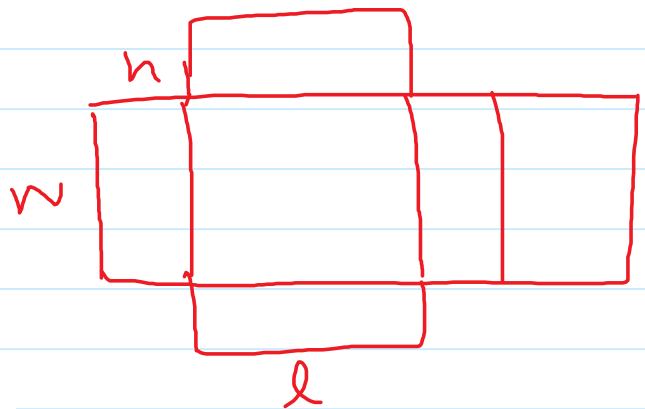
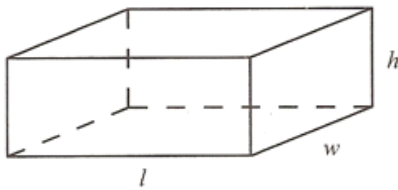


Right Cylinder

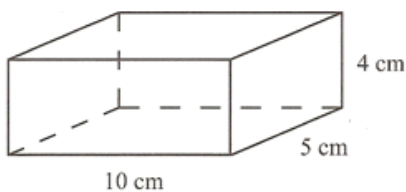


Not Right Cylinder

## Right Rectangular Prism And Its Net

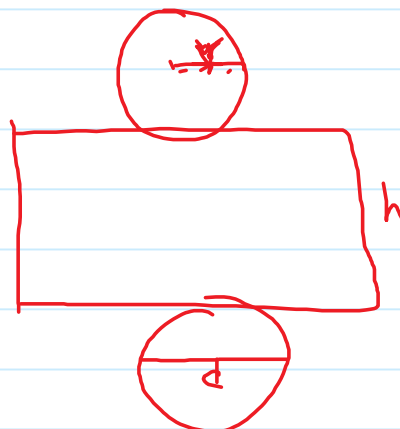
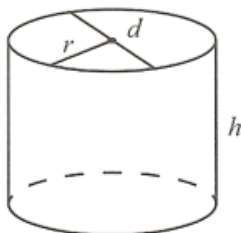


**Example 1** Find the surface area of the following figure:



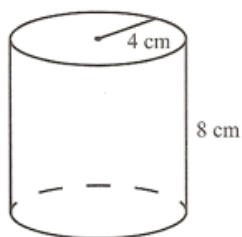
$$\begin{aligned}
 SA &= 2lh + 2lw + 2wh \\
 &= 2(10 \cdot 4) + 2(10 \cdot 5) + 2(5 \cdot 4) \\
 &= \boxed{220 \text{ cm}^2}
 \end{aligned}$$

## Right Cylinder And Its Net



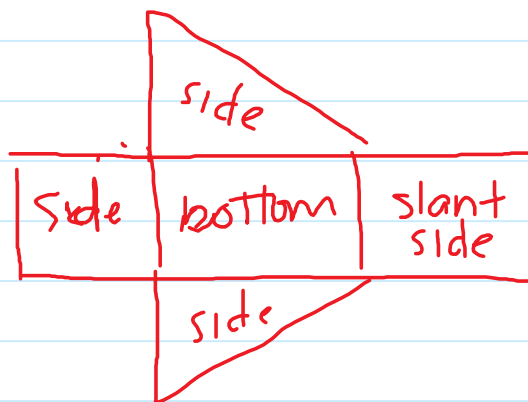
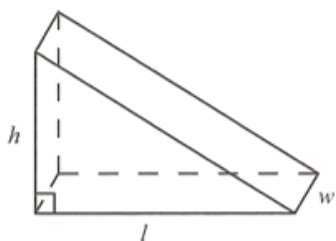
**Example 3** Find the surface area of the following figure:

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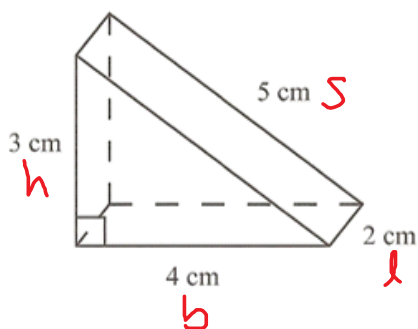


$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi rh \\
 &= 2\pi(4)^2 + 2\pi \cdot 4 \cdot 8 \\
 &= \boxed{301.6 \text{ cm}^2}
 \end{aligned}$$

**Right Triangular Prism And Its Net**



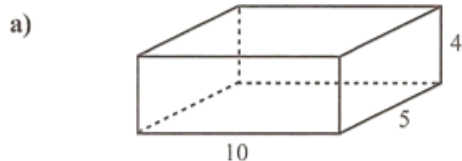
**Example 2** Find the surface area of the following figure:



$$\begin{aligned}
 SA &= bh + bl + ls + lh \\
 &= 4 \cdot 3 + 4 \cdot 2 + 2 \cdot 5 + 2 \cdot 3 \\
 &= \boxed{36 \text{ cm}^2}
 \end{aligned}$$

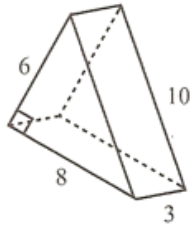
### 1.5 Exercise Set

- Find the **surface area** of the following figures. All measurements are in centimetres. All prisms are right prisms. Round answers to one decimal place.



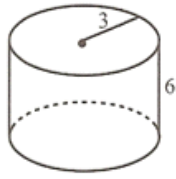
220 cm<sup>2</sup>

b)



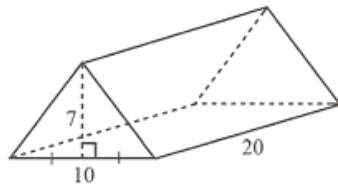
$$\underline{170\text{cm}^2}$$

c)



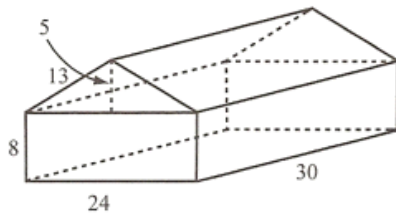
$$\underline{169.6\text{cm}^2}$$

d)



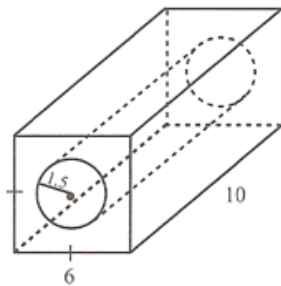
$$\underline{6141\text{cm}^2}$$

e)



$$\underline{2484\text{cm}^2}$$

f)



$$\underline{392.1\text{cm}^2}$$