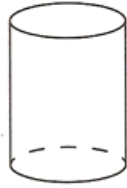


# 1.3A Surface Area: NETS

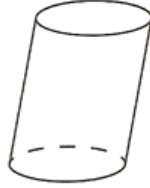
October 22, 2015 11:56 AM

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:

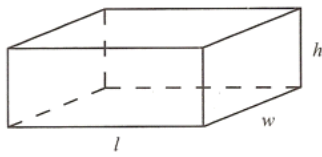


Right Cylinder

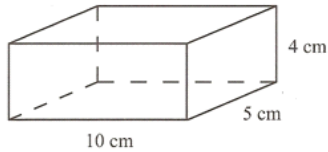


Not Right Cylinder

## Right Rectangular Prism And Its Net

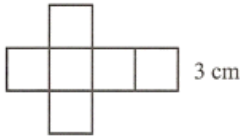


**Example 1** Find the surface area of the following figure:



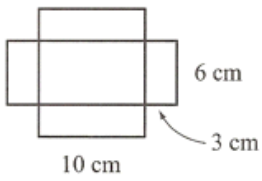
2. Determine the surface area of the following nets:

a) A cube



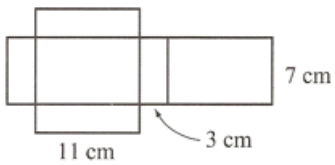
\_\_\_\_\_

b) An open top box



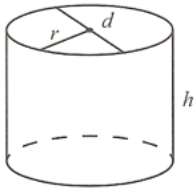
\_\_\_\_\_

c) A closed top box

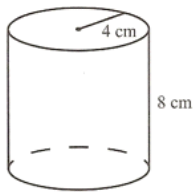


\_\_\_\_\_

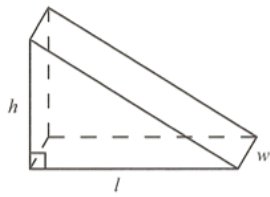
Right Cylinder And Its Net



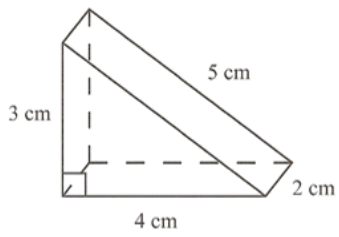
**Example 3** Find the surface area of the following figure:



**Right Triangular Prism And Its Net**



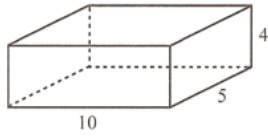
**Example 2** Find the surface area of the following figure:



1.5 Exercise Set

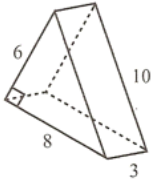
1. Find the surface area of the following figures. All measurements are in centimetres. All prisms are right prisms. Round answers to one decimal place.

a)



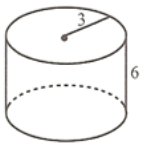
\_\_\_\_\_

b)



\_\_\_\_\_

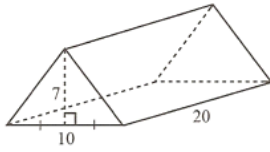
c)



\_\_\_\_\_

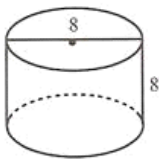


d)



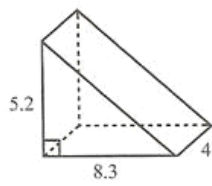
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j)



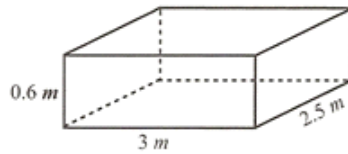
\_\_\_\_\_

i)



\_\_\_\_\_

2. An outside playpen is placed on the grass. If the walls of the playpen are to be painted inside and outside, what is the total area to be painted?



3. A toy box measures  $0.9\text{ m} \times 0.9\text{ m}$  and  $0.5\text{ m}$  high. What is the total area of plywood required to build the open-top box?

4. A certain type of drainage tile is made from clay. Each tile is a cylindrical shell  $30\text{ cm}$  long with an inside and outside diameter of  $10\text{ cm}$  and  $12\text{ cm}$ . What is the surface area of each clay tile?

5. A bedroom has length  $4.8\text{ m}$ , width  $4.2\text{ m}$  and height  $2.2\text{ m}$ .
- a) Find the surface area of the walls and ceiling. Assume no doors or windows.
- b) If one litre of paint covers  $8\text{ m}^2$ , and Mary applies two coats of paint, how many litres of paint will she need for this room?
6. A can of peas has a height of  $15\text{ cm}$  and a circumference of  $10\pi\text{ cm}$ . What is the amount of paper needed for the label of this can of peas?



7. If the radius of a right circular cylinder is  $4\text{ cm}$  and the total surface area is  $72\pi\text{ cm}^2$ , what is the height?

8. The length of a rectangular solid is three times the width and the height is twice the width. If the surface area is  $198\text{ cm}^2$ , what is the width of the rectangular solid?