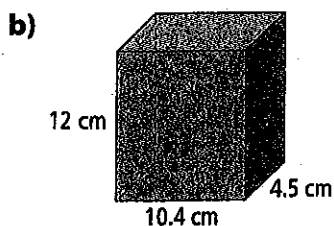# Surface Area of a Prism

MathLinks 8, pages 176–181
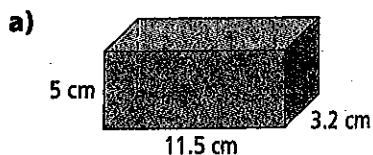
Key Ideas Review

1. Complete the statement.
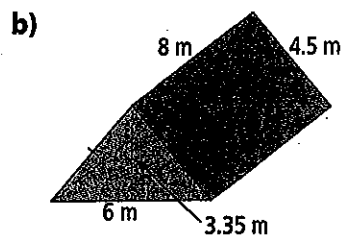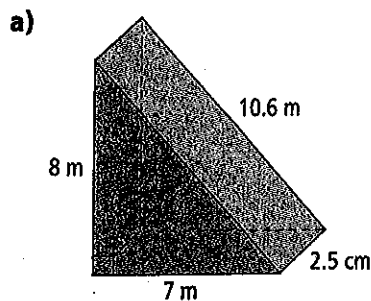
   Finding the sum of all the areas of each _____ on a 3-D object

   is called calculating the _____ _____ .

Practise and Apply

2. Calculate the surface area of each rectangular prism to the nearest tenth of a centimetre squared.

   a)

   5 cm

   3.2 cm

   11.5 cm

   b)

   12 cm

   4.5 cm

   10.4 cm

3. Find the surface area of each triangular prism to the nearest tenth of a meter squared.

   a)

   10.6 m

   8 m

   2.5 cm

   7 m

   b)

   8 m   4.5 m

   6 m   3.35 m

4. Ty is painting this storage bench for the deck. How much area does he need to paint, to the nearest hundredth of a square metre?

0.5 m

1.56 m

0.38 m
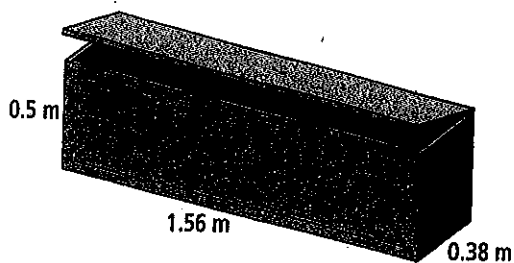
6. The Rileys need to make a new cover for their tent before going camping this summer. Their tent measures 2.2 m in length by 1.6 m wide, and it has a height of 1.1 m.

1.36 m

$h = 1.1$ m

2.2 m

1.6 m
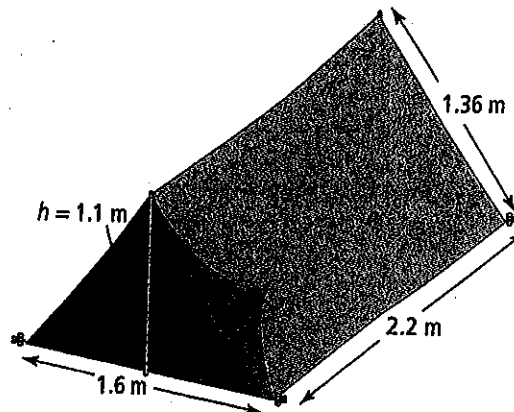
a) Calculate the amount of material they need to make the new cover.

5. Peter needs to paint three boxes for a project. The boxes measure 1.5 m × 1.5 m × 1.5 m, 2.5 m × 2.5 m × 2.5 m, and 3.5 m × 3.5 m × 3.5 m respectively. What is the total surface area that Peter will paint, if he paints the outside of all of the boxes?
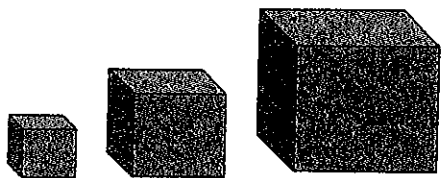
b) Waterproof material at the Fabric Warehouse is on sale this week for $24.95 a square metre. Calculate the cost to make the new cover.

5.4 Surface Area of a Cylinder

MathLinks 8, pages 182–187

Key Ideas Review
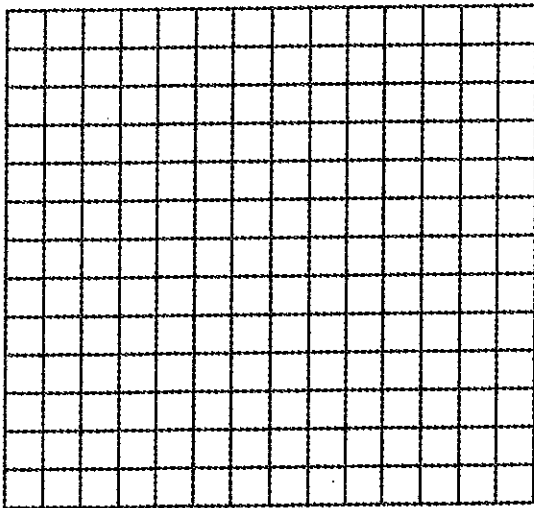
Choose from the following terms to complete #1.

| 3-D object | add | area | circumference | cylinder |

1. Complete each statement.

   a) To find the surface area of a cylinder, you _____ the

   _____ of each face of the object.

   b) A net of a _____ is made up of three faces.

   c) The rectangle in the net of a cylinder uses the _____ of the
   circle as one dimension.

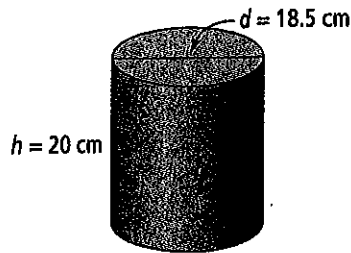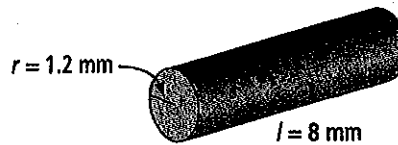## Practise and Apply

2. Sketch a net for this cylinder.
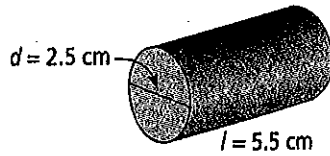
3. Estimate the surface area for each cylinder.

   a) $d = 18.5$ cm

   $h = 20$ cm

   b) $r = 1.2$ mm

   $l = 8$ mm

4. Calculate the surface area of this cylinder to the nearest hundredth of a square centimetre.

$d = 2.5$ cm

$l = 5.5$ cm

6. Recordable disks come in bulk packaging of various sizes.

A single compact disk has a diameter of 12 cm and a width of 0.1 cm.

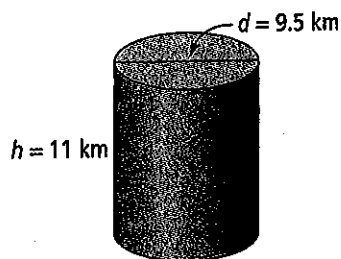**a)** Calculate the surface area of one compact disk to the nearest tenth of a centimetre squared.

5. Use the following formula to find the surface area of each cylinder to the nearest hundredth of a square unit.

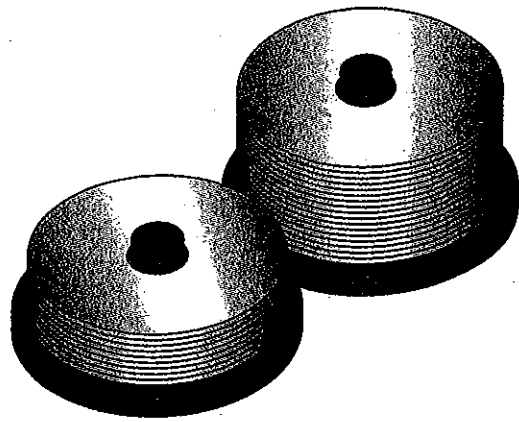$$SA = (2 \times \pi \times r^2) + (\pi \times d \times h)$$

a)

$r = 7$ mm

$h = 4.5$ mm

b) Calculate the surface area of a bulk container that holds 50 compact disks. Explain your reasoning.

b)

$d = 9.5$ km

$h = 11$ km