

Name: \_\_\_\_\_

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5.2

# Nets of Three-Dimensional Objects

MathLinks 8, pages 170–175

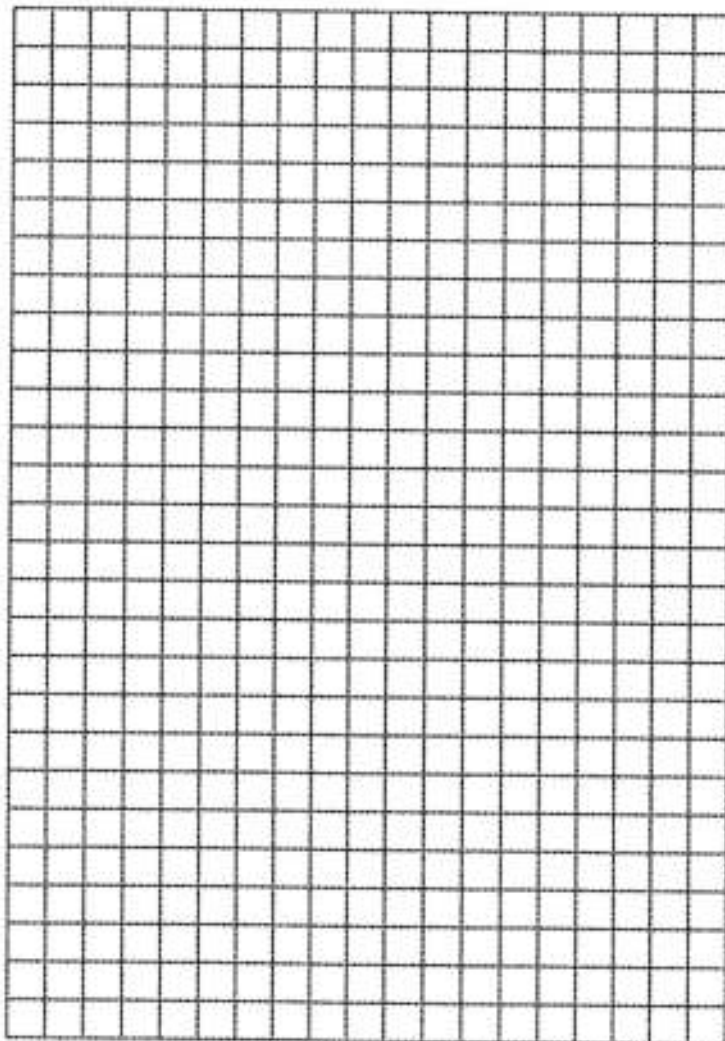
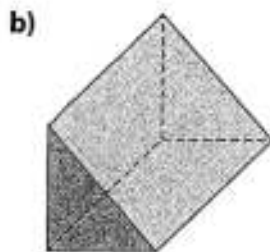
## Key Ideas Review

1. Complete each statement.

- a) A \_\_\_\_\_ is a 2-D figure that creates a 3-D object when it is folded.
- b) Different nets can be folded into the same \_\_\_\_\_.

## Practise and Apply

2. Draw a net for each object.

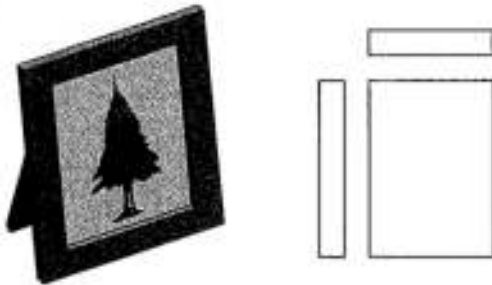


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4. Circle the top view of each object.

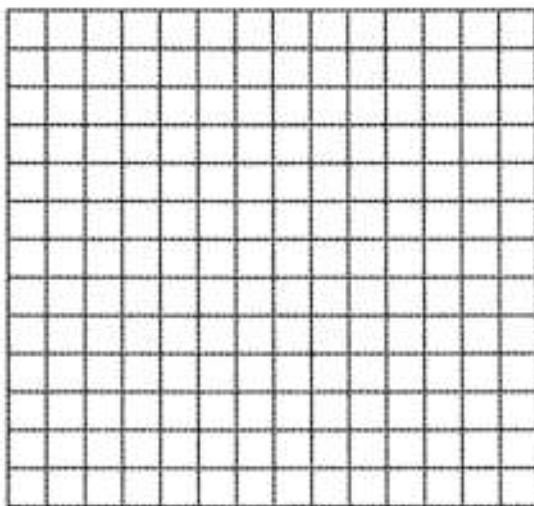
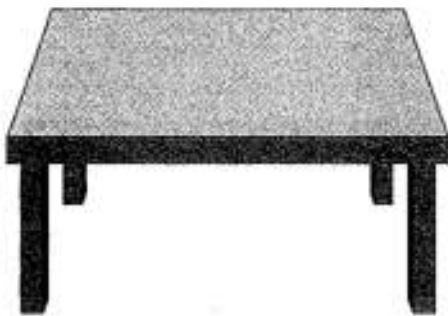
a)



b)

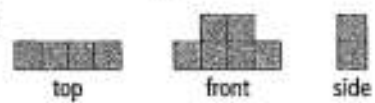


5. Draw and label the top, front, and side views when this table is rotated 90° clockwise.

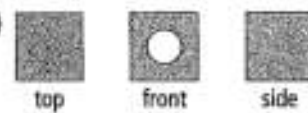


6. Sketch each 3-D object from the three views given.

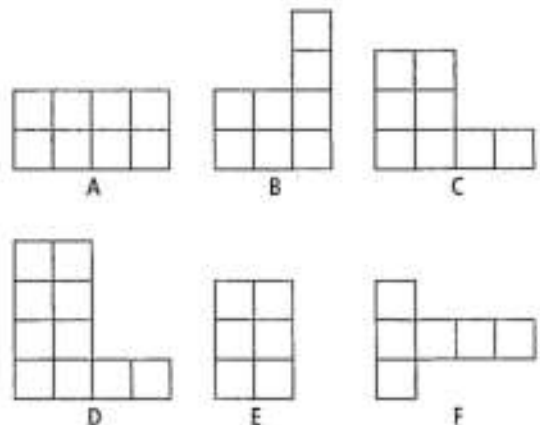
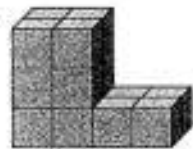
a)



b)



7. Choose the correct top, front, and side view for this object and label each one.



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## Surface Area of a Prism

*MathLinks 8, pages 176–181*

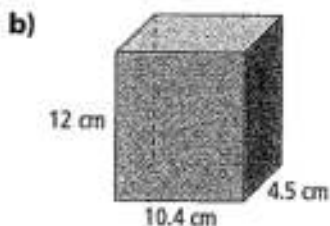
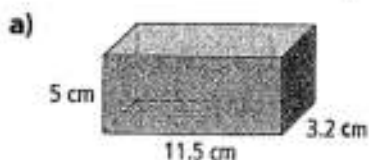
### Key Ideas Review

1. Complete the statement.

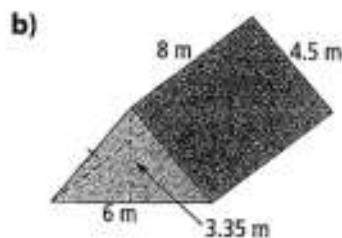
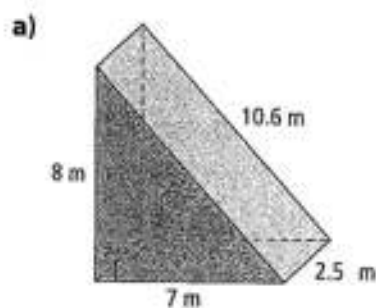
Finding the sum of all the areas of each \_\_\_\_\_ on a 3-D object is called calculating the \_\_\_\_\_.

### Practise and Apply

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



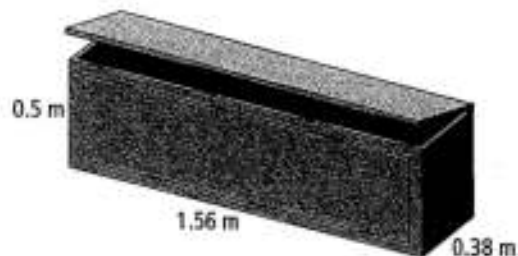
3. Find the surface area of each triangular prism to the nearest tenth of a meter squared.



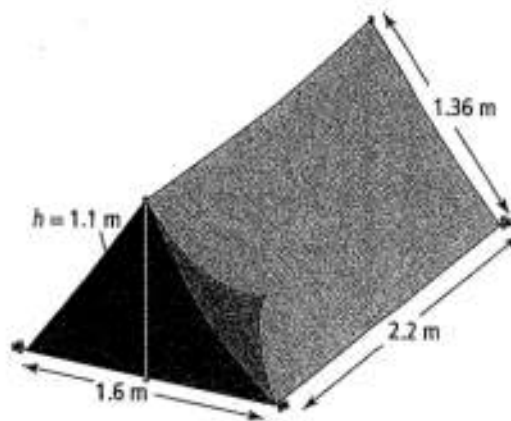
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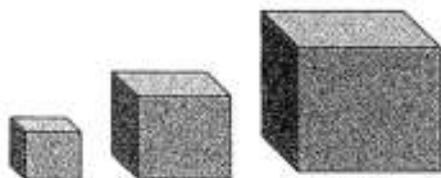
4. Ty is painting this storage bench for the deck. How much area does he need to paint, to the nearest hundredth of a square metre?



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.



5. Peter needs to paint three boxes for a project. The boxes measure  $1.5\text{ m} \times 1.5\text{ m} \times 1.5\text{ m}$ ,  $2.5\text{ m} \times 2.5\text{ m} \times 2.5\text{ m}$ , and  $3.5\text{ m} \times 3.5\text{ m} \times 3.5\text{ m}$  respectively. What is the total surface area that Peter will paint, if he paints the outside of all of the boxes?



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

- 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.

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## 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

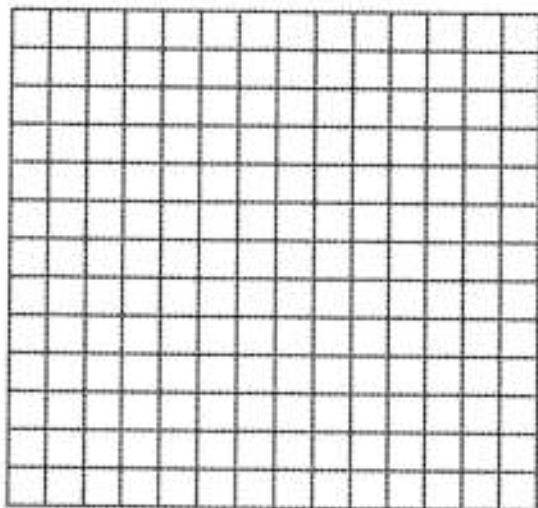
cylinder

1. Complete each statement.

- To find the surface area of a cylinder, you \_\_\_\_\_ the \_\_\_\_\_ of each face of the object.
- A net of a \_\_\_\_\_ is made up of three faces.
- The rectangle in the net of a cylinder uses the \_\_\_\_\_ of the circle as one dimension.

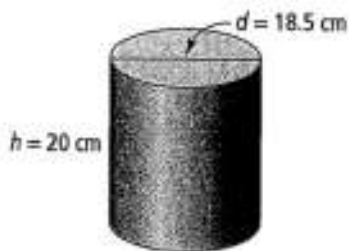
### Practise and Apply

2. Sketch a net for this cylinder.



3. Estimate the surface area for each cylinder.

a)



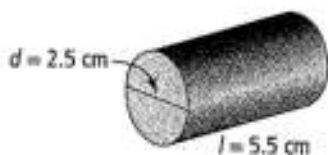
b)



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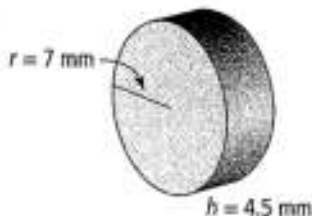
4. Calculate the surface area of this cylinder to the nearest hundredth of a square centimetre.



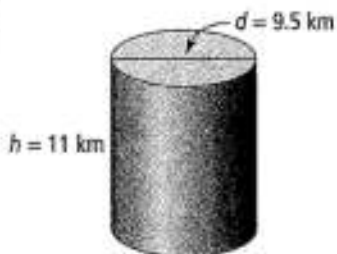
5. Use the following formula to find the surface area of each cylinder to the nearest hundredth of a square unit.

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

a)



b)



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