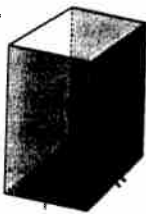


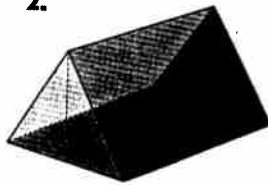
Practice Pg 270

Name each prism.

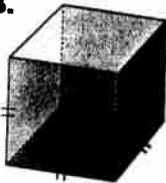
1.



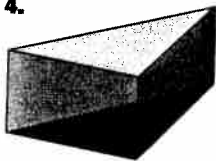
2.



3.



4.

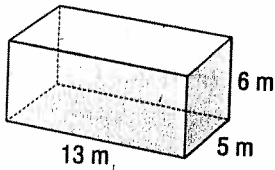


Section 7.3 pp. 270-271

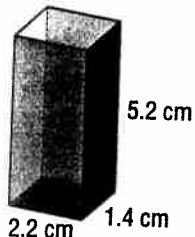
Practice 1. rectangular prism 2. triangular prism
 3. square prism 4. triangular prism 5. square prism
 6. triangular prism 7. 346 m^2 8. 43.6 cm^2
 9. 150 cm^3 10. 958 m^2 11. 24 m^3 12. 180 cm^3
 13. 1716 cm^3 14. 108 m^3 15. 278 m^2 , 198 m^3
 16. 685 m^2 , 850 m^3 17. $12\,000 \text{ cm}^2$, $60\,000 \text{ cm}^3$
 18. 150 cm^2 , 112 cm^3 19. $132\,200 \text{ m}^2$, $3\,036\,000 \text{ m}^3$
 20. 1637 m^2 , 3300 m^3 **Problems and Applications**
 21. a) 9 m^2 b) 1.8 m^3 22. a) 94 m^2 b) 5
 23. a) 4.6 m^2 b) $\$45.91$ c) 27 227 24. 6 cm by 6 cm by 6 cm
 25. a) 232 cm^2 c) rectangular prism
 26. 5.44 m^3 27. 662 m^2 , 841 m^3 28. a) 115 m^3
 b) approximately 6 h 23 min

Estimate the surface area of each prism. Then, calculate it to the nearest square centimetre or square metre.

7.

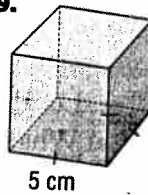


8.

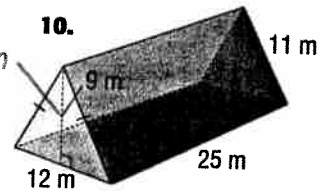


Calculate each surface area.

9.

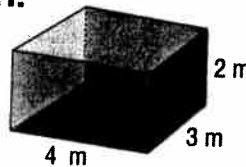


10.

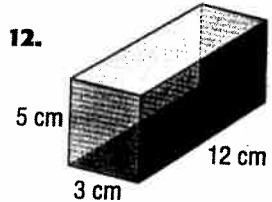


Estimate, then calculate the volume of each rectangular prism.

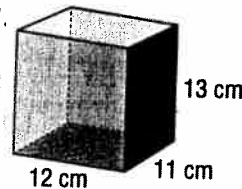
11.



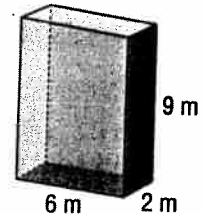
12.



13.

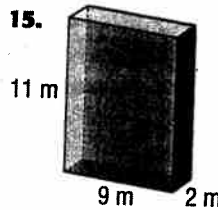


14.

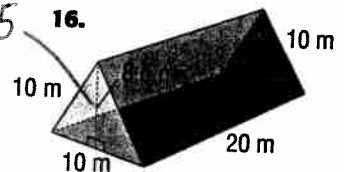


Calculate the surface area and volume of each prism to the nearest square or cubic unit.

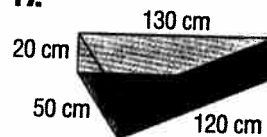
15.



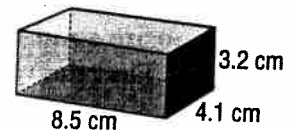
16.



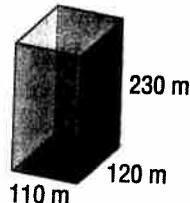
17.



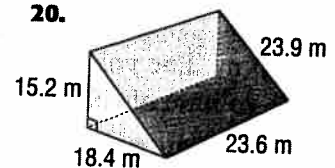
18.



19.



20.

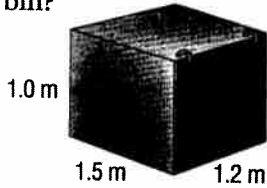


Problems and Applications

Pg 271

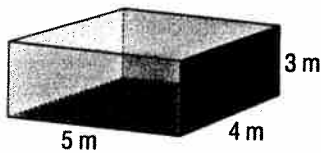
21. A covered garbage bin is to be built so that it measures 1.5 m by 1.2 m by 1.0 m.

a) How much plywood will it take to build the garbage bin?



b) How many cubic metres of garbage will it hold?

22. a) Calculate the surface area of this room.



b) One 4-L can of paint will cover 36 m^2 . If you want to give the ceiling and walls of the room 2 coats of paint, how many 4-L cans will you need? What assumptions have you made?

23. a) The dimensions of the base of a composter are 1 m by 1 m. Its height is 0.65 m. It is a prism with a top, a bottom, and 4 sides. Calculate its surface area.

b) The cost of material to build this composter is $\$9.98/\text{m}^2$. What is the total cost of the material?

c) If a town has set aside $\$1\,250\,000$ for the materials to build these composters, how many composters can be built?

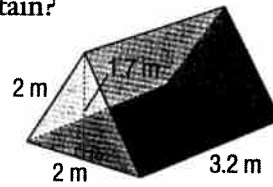
24. The surface area of a cube is 216 cm^2 . What are the dimensions of this cube?

25. a) A prism has a height of 10 cm. Find its surface area if the dimensions of the base are 8 cm by 2 cm.

b) Draw and label a diagram of the prism on dot paper or centimetre grid paper.

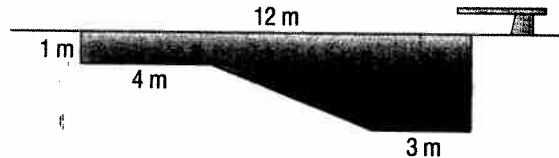
c) What is the name of the prism?

26. How many cubic metres of air does the tent contain?



27. Canada's Anik E1 is a domestic communications satellite. Launched in September, 1991, it is a rectangular prism with $l = 23 \text{ m}$, $w = 8.5 \text{ m}$, and $b = 4.3 \text{ m}$. Calculate the surface area and volume of Anik E1 to the nearest square or cubic unit.

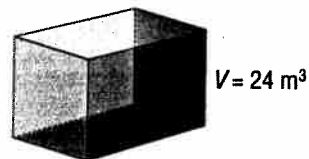
28. The diagram shows the side view of a pool.



a) The pool is 5 m wide. Calculate its volume.

b) A pump can drain water from the pool at $0.3 \text{ m}^3/\text{min}$. How long does it take to drain the pool?

29. A garden storage shed is to be built in the shape of a rectangular prism before the roof is added. The volume of the shed before the roof is put on is 24 m^3 . What are the most appropriate dimensions for the rectangular prism?



30. Work with a partner to calculate the surface area and volume of the interior of your classroom.

31. Write a problem that requires the calculation of the surface area and volume of a prism. Have another classmate solve your problem.