





7.60 - Questions Handout #s 1 - 16

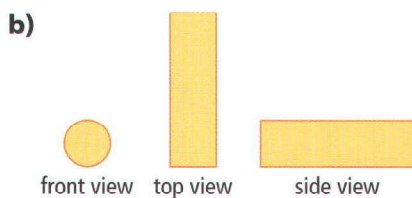
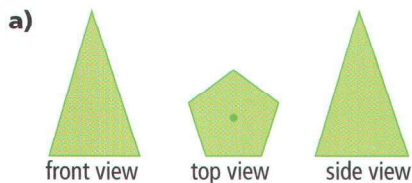
Key Words

For questions 1 to 3, copy the statement and fill in the blanks. Use some of these words: *cube, edges, faces, net, prism, pyramid, triangular, rectangular, skeleton, vertices*

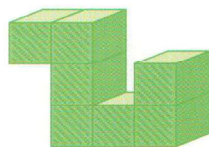
1. A  has two faces that are congruent triangles and three faces that are rectangles.
2. A  is a framework made of the  of a three-dimensional figure.
3. The surface area of a three-dimensional figure is the sum of the areas of its .
4. Rearrange the circled letters in questions 1 to 3 to make a key word. Define this word.

8.1 Recognize and Sketch Three-Dimensional Figures, pages 244–247

5. Name the three-dimensional figure that has each set of three views.

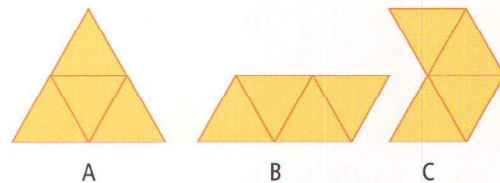


6. Draw the front, top, and side views of this object.

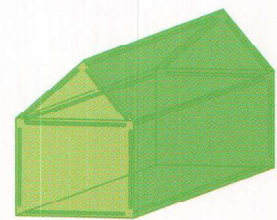


8.2 Build Models of Three-Dimensional Figures, pages 248–252

7. Which of the following nets will not fold to form a triangular pyramid? Check your prediction. Draw the nets on paper, and then cut them out and fold to see.



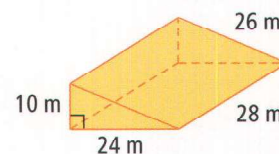
8. How many edges and vertices are in the skeleton of this house?



9. Draw the skeleton for a hexagonal prism. State the number of faces, vertices, and edges it has.

8.3 Surface Area of a Triangular Prism, pages 253–258

10. Calculate the surface area of this large ramp.



11. Yolanda has three vases that are triangular prisms. She wants to spray-paint the outside of the vases. Determine the surface area of each vase to be painted, given the following information.

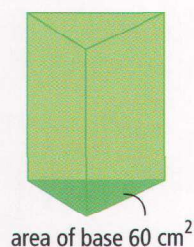
Vase A: The area of the triangular base is 20 cm^2 , and the total area of the rectangular faces is 150 cm^2 .

Vase B: The triangular base has an area of 5 cm^2 , and each rectangular face has an area of 25 cm^2 .

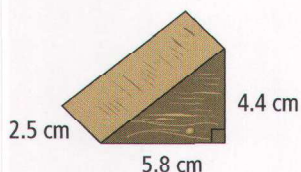
Vase C: The triangular base has an area of 11 cm^2 , and each rectangular face measures 5 cm by 20 cm .

8.4 Volume of a Triangular Prism, pages 259–263

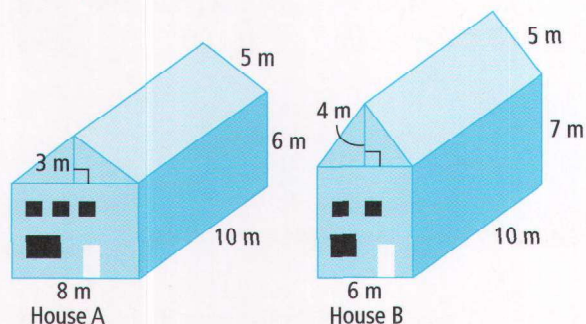
12. What is the height of this triangular prism if its volume is 1200 cm^3 ?



13. Find the volume of this wooden doorstep.

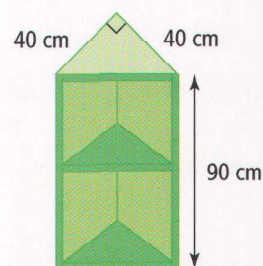


14. The two houses in the diagram are on the same street and they are both for sale. Henry wants to buy the house with the most attic space. Which house should he buy?



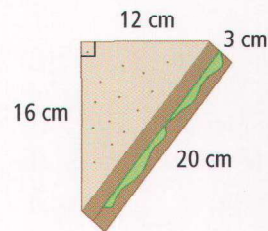
8.5 Surface Area or Volume of Triangular Prisms, pages 264–267

15. Helen is building a triangular corner shelving unit to display pictures and awards. The unit resembles a triangular prism and is made using five pieces of wood.



- a) Calculate the area of wood needed to make the shelving unit.
b) Calculate the amount of space taken up by the shelving unit.

16. Pierre is packing sandwiches into his lunch box. Each sandwich has been sliced diagonally into halves.



- a) How much plastic is required to wrap each sandwich to keep it fresh? Justify your answer.
b) How many sandwiches can fit in the lunch box if its volume is 1625 cm^3 ?
c) What assumptions did you make in part b)?