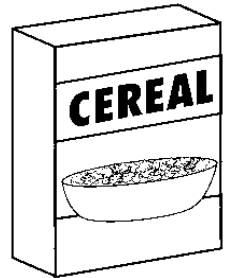


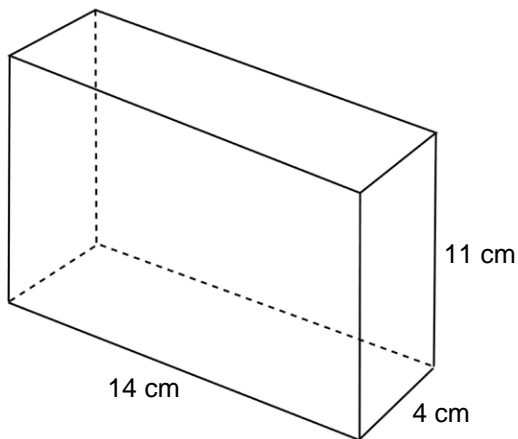
Yum Yum Cereal

Part 1

Congratulations on being hired as the new design engineer for Yum Yum Cereal Company. You are excited to use all of your expertise to make your new boss proud.



1. Find the total surface area of the rectangular prism. Show your work, step by step.



SA = _____

2. Find the volume of the rectangular prism above. Explain your steps.

V = _____

3. If the volume of a rectangular prism is 240 cm^3 , what could be the dimensions? Draw and label diagrams showing at least three possible rectangular prisms with this volume.

Student Name _____

7. The shelves at Super Size Mart are each 30 cm wide, 40 cm high, and 600 cm long. There are 4 shelves in each unit. Based on this information, would you recommend producing either of the boxes you designed to hold the Yum Yum cereal? Explain your reasoning.

Part 3

8. Based on your work in questions 4 through 7, recommend the best size of cereal box for Yum Yum Cereal Company to sell at Super Size Mart. You can use one of the boxes you already designed or come up with a new one. Make sure the volume is 4000 cm^3 , that it is economical, and that it will fit on the shelves. To share your recommendation, create a flier that includes this information:

- a sketch of the box with the dimensions labeled,
- calculations showing the volume and surface area,
- the cost to produce a box of this size, and
- at least two different reasons why you chose this size box.

Organize your work neatly and creatively so that your new boss will be impressed.