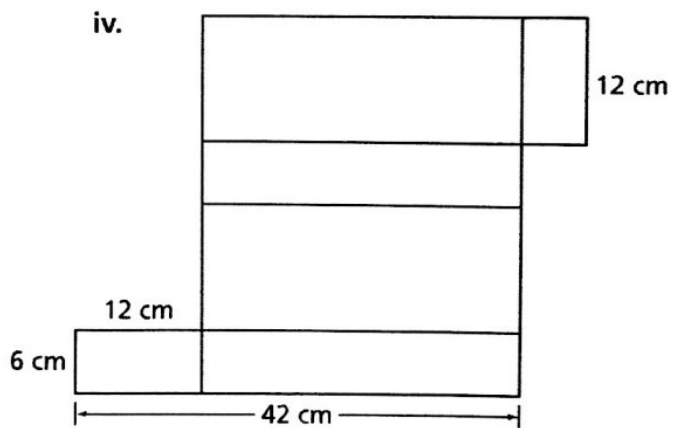
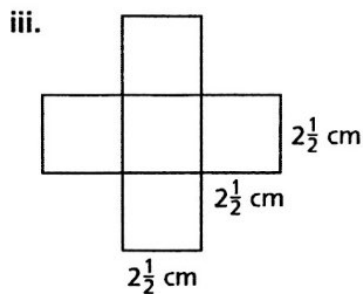
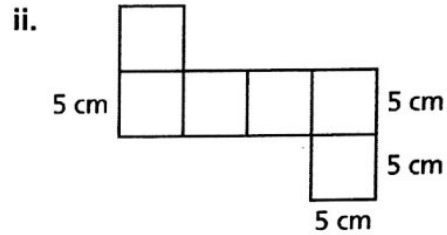
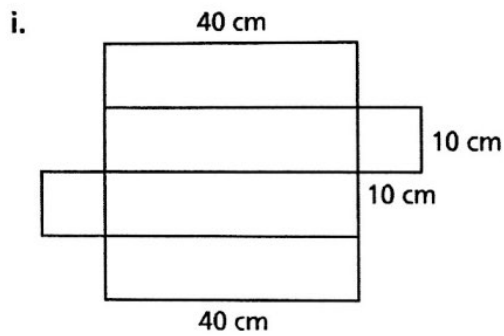


# Additional Practice

## Investigation 4

### Covering and Surrounding

1. The four nets below will fold into rectangular boxes. Net *iii* folds into an open box. The other nets fold into closed boxes. Answer the following questions for each net.
- What are the dimensions of the box that can be made from the net?
  - What is the surface area of the box?
  - What total number of unit cubes would be needed to fill the box?



## Additional Practice *(continued)*

### Investigation 4

#### Covering and Surrounding

2. a. Gina has a sheet of cardboard that measures 9 feet by 6 feet. She uses scissors and tape to make the entire sheet of cardboard into a closed box that is a perfect cube. What is the surface area of the box?
- b. What is the length of each edge of the box? Explain your reasoning.
- c. How many unit cubes would it take to fill the box?
3. a. Bill has a sheet of cardboard with an area of 10 square feet. He makes the entire sheet of cardboard into a closed rectangular box. The four sides of the box have the same area, and the two ends have the same area. The area of each of the four equal sides is twice the area of each end. What is the area of each face of Bill's box?
- b. What are the dimensions of Bill's box?
- c. How many unit cubes would it take to fill the box?

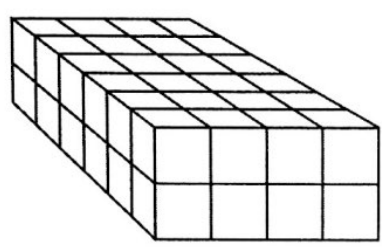
### Additional Practice *(continued)*

### Investigation 4

#### Covering and Surrounding

4. The bottom of a closed rectangular box has an area of 50 square centimeters. If the box is 8 centimeters high, give at least three possibilities for the dimensions of the box.

5. The rectangular prism below is made from centimeter cubes.



- a. What are the dimensions of the prism?
  
  
- b. What is the surface area of the prism?
  
  
- c. What is the volume of the prism? That is, how many cubes are in the prism?
  
  
- d. Give the dimensions of a different rectangular prism that can be made from the same number of cubes. What is the surface area of the prism?

Copyright © Pearson Education, Inc., or its affiliates. All Rights Reserved.

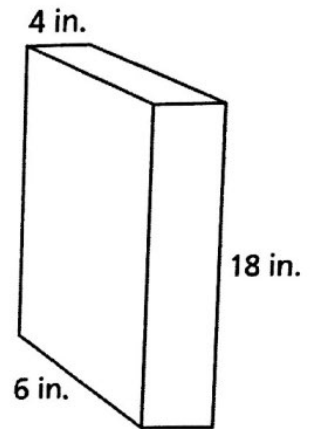
**Investigation 4**

**Additional Practice** *(continued)*

**Covering and Surrounding**

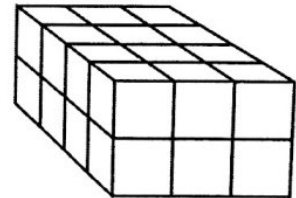
6. Use the diagram at the right to answer the following questions.

a. What is the total surface area of the box, including the bottom and the top?



b. How many inch cubes would it take to fill the box? Explain your reasoning.

7. a. Each small cube in the rectangular prism at the right has edges of length 2 centimeters. What are the dimensions of the prism in centimeters?



b. What is the surface area of the prism in square centimeters?

c. How many 1-centimeter cubes would it take to make a prism with the same dimensions as this prism? Explain your reasoning.

### Additional Practice *(continued)*

### Investigation 4

### Covering and Surrounding

8. Answer parts (a) and (b) for each closed box below.

a. What is the surface area of each box?

b. What is the volume of each box?

