

Lesson 5-7 • Group 2

Reinforce Understanding

5.7 Small Group • Group 2

I can find the surface area of rectangular and triangular prisms, explain why the method works, and use it on a problem I have not seen before.

Worked model

A rectangular prism is 9 cm long, 6 cm wide, and 4 cm tall. Find its surface area.

1. Unfold it into a net. The 6 faces come in 3 matching pairs.
2. Find one face from each pair. $9 \times 6 = 54$ $9 \times 4 = 36$ $6 \times 4 = 24$
3. Add those three. $54 + 36 + 24 = 114$
4. Each one happens twice, so double. $114 \times 2 = 228$

Answer: The surface area is 228 square centimeters (228 cm^2).

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Calculate the surface area of each rectangular prism time capsule.

Complete the table. Show how you found each value.

Capsule	Length	Width	Height	Surface Area
Capsule E	12 in	8 in	5 in	
Capsule F	9 cm	6 cm	6 cm	
Capsule G	15 ft	4 ft	3 ft	

Show your work

2. What is the combined area of the left and right faces?

Use the model to solve. Show your work.

Show your work

Answer: _____

3. A rectangular time capsule box measures 3 in by 4 in by 5 in. How much wrapping paper covers its surface (no overlap)?

Circle the letter of the best answer. Show how you know.

- A. 47 in^2
- B. 60 in^2
- C. 94 in^2
- D. 94 in^3

Show your work
