

Lesson 5-7

Reinforce Understanding

Determine Surface Area of Prisms

I can find the surface area of rectangular and triangular prisms.

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. Put the steps in order for finding the surface area of a triangular prism.

Write the name of the correct group on each line.

Groups: Steps in order (first $\rightarrow$ last)

- _____ Find the area of one triangular base
- _____ Multiply the triangle area by 2 (two bases)
- _____ Find the area of each rectangular lateral face
- _____ Add all three rectangle areas together
- _____ Add the two triangle areas + all rectangle areas = SA

2. Match each solid to its description.

Write the letter of the matching item on each line.

1. _____ Rectangular prism
2. _____ Triangular prism
3. _____ Cube
4. _____ Surface area
5. _____ Volume
6. _____ Net

- A6 faces (all rectangles)
- B5 faces (2 triangles + 3 rectangles)
- C6 identical square faces
- DUses square units (in^2)
- EUses cubic units (in^3)
- F2D pattern that folds into 3D