

Chapter 4 Surface Area of Prisms

Worksheet C Mixed Practice and Application

Name: _____ Grade: _____ Date: _____

1. Wrapping a Gift

A gift box is 12 cm long, 8 cm wide, and 5 cm high.

a. What measurement is needed: surface area or volume?

b. Find the amount of wrapping paper needed, not including overlap.

2. Open-Top Box

A storage bin has no top.

It is 15 cm long, 10 cm wide, and 6 cm high.

a. Why should the top not be counted?

b. Find the outside area of the bin.

3. Triangular Prism Tent

A tent is shaped like a triangular prism.

Each triangular end has base 4 m and perpendicular height 3 m.

The rectangular faces are 5 m $\times$ 10 m, 5 m $\times$ 10 m, and 4 m $\times$ 10 m.

Find the surface area of the tent shape.

4. Student Error

A student says:

“The surface area of a 9 cm by 5 cm by 4 cm rectangular prism is $9 \times 5 \times 4 = 180 \text{ cm}^2$.”

Explain the mistake and find the correct surface area.

5. Unit Trap

A student finds the correct number for surface area but writes:

248 cm^3

Explain why the unit is wrong.

6. Visible Faces Trap

A drawing of a closed rectangular prism shows only the top, front, and side.

A student finds the area of only those 3 faces.

Explain why the answer is incomplete.
