Answers and talk notes

Determine Surface Area of Prisms

What your student is learning

Tonight we find the surface area of prisms, including the wedge-shaped triangular prism. For any prism, we find the area of every face and add them all up.

Answers

Ask your student to explain before you look.

1. **B.** 5. A triangular prism has 5 faces: 2 triangles and 3 rectangles.
2. **A.** 15 square units. 15 square units: 5 × 3 = 15.
3. **C.** 52 square units. 52 square units: 6 + 8 + 12 = 26, and 2 × 26 = 52.
4. **D.** 96 cm^2. 96 cm^2: one face is 4 × 4 = 16, and 6 × 16 = 96.
5. **B.** 108 cm^2. 108 cm^2: the faces are 24, 18 and 12, which add to 54, and 2 × 54 = 108.

Talk about it

Which faces are pairs, and why do you double each area?

Home mission

Find a cereal box. Count its faces out loud. Which faces match each other? Then name the biggest face.

When they are stuck, ask

- How many faces does this prism have? Let's list each one.
- Did we add the area of every single face?
- Is this surface area (square units) or volume (cubic units)?

Try not to say

- Just multiply length × width × height — that gives surface area.
- A triangular prism has 6 faces like a box.
- Only count one face from each pair.