Area of triangles — half a rectangle

MODULE 4 · MEASURES — LENGTH, MASS, CAPACITY, AREA, VOLUME NUMBER

A triangle is **half** of its enclosing rectangle. So the area is **½ × base × perpendicular height**. The height must be at right angles to the base — not the slanting side.

	× 6
4	24

→ Triangle with base **6 cm** and height **4 cm**: area = ½ × 6 × 4 = **12 cm²** (half of the 6 × 4 rectangle above).

→ Triangle with base **10 cm** and height **5 cm**: area = ½ × 10 × 5 = **25 cm²**.

→ Right-angled triangle with legs **3 cm and 8 cm**: base = 3, height = 8 → area = ½ × 3 × 8 = **12 cm²**.

AREA OF A TRIANGLE WITH BASE 8 CM AND HEIGHT 5 CM

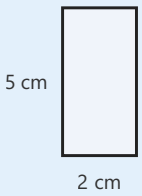
1. Identify the **base** (8 cm) and the **perpendicular height** (5 cm). The height must be at right angles to the base.
2. Multiply: base × height = 8 × 5 = **40**.
3. Halve it (a triangle is half its enclosing rectangle): 40 ÷ 2 = **20**.
4. Add the units: area = **20 cm²**.

HOW TO ANSWER TODAY

- **Area.** Area = length × width. Write the answer in square units (cm², m²).
  5 m × 3 m → 15 m²
- **Triangle area.** Area = ½ × base × perpendicular height. The height must be at right angles to the base.
  Base 6 cm, height 4 cm → ½ × 6 × 4 = 12 cm²

WARM-UP

1



Saoirse cuts a small rectangular card panel to use as a deck on her model bridge for STEM week. The panel measures **2 cm** by **5 cm**. What is the area of the card panel?

2 Aoife cuts a triangular sandwich flag for the 5th class bake sale poster. The triangle has a base of **6 cm** and a perpendicular height of **6 cm**. What is the area of the flag?

> A triangle has a base of 6 cm and a perpendicular height of 6 cm. What is its area?