

Area of triangles – half a rectangle

WHAT THIS LESSON TEACHES

A triangle is **half** of its enclosing rectangle. So the area is $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$. The height must be at right angles to the base — not the slanting side.

→ Triangle with base **6 cm** and height **4 cm**: area = $\frac{1}{2} \times 6 \times 4 = 12 \text{ cm}^2$ (half of the 6×4 rectangle above).

→ Triangle with base **10 cm** and height **5 cm**: area = $\frac{1}{2} \times 10 \times 5 = 25 \text{ cm}^2$.

→ Right-angled triangle with legs **3 cm and 8 cm**: base = 3, height = 8 → area = $\frac{1}{2} \times 3 \times 8 = 12 \text{ cm}^2$.

	× 6
4	24

MODEL THIS ON THE BOARD

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 $\times$ height = $8 \times 5 = 40$.
- 3 Halve it (a triangle is half its enclosing rectangle): $40 \div 2 = 20$.
- 4 Add the units: area = **20 cm²**.

ANSWER KEY

W1: 10 cm²

W2: 18 cm²

Q1: 189 m²

Q2: 20 cm²

Q3: 30.69 m²

Q4: 22.5 cm²

EXTENSION SHEET · STRETCH ANSWERS

S1: 34.71 m²

S2: 24.09 m²

S3: 425 m²

S4: 168 m²

S5: 119 m²