

Estimation across attributes

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

HOW TO ANSWER TODAY

- **Estimate gap.** Subtract the smaller from the bigger to find how far off the estimate was.
Estimated 15 cm, real 12.5 cm → 2.5 cm off
- **Triangle area.** Area = $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$. The height must be at right angles to the base.
Base 6 cm, height 4 cm → $\frac{1}{2} \times 6 \times 4 = 12 \text{ cm}^2$

WARM-UP

Estimate first — write your guess in the Estimate column. Then measure each item and write the actual value. Work out the Difference — how close was your estimate?

	Estimate	Actual	Difference
a. Length of your pencil (cm)			
b. Mass of your pencil-case (g)			
c. Capacity of your water bottle (ml)			
d. Length of your shoe (cm)			
e. Mass of a maths book (g)			
f. Capacity of a school milk carton (ml)			

PRACTICE

- Oisín is filling a measuring jug at the school sink for a science experiment. The jug holds **3000** cm^3 of water. How many litres is that, given that **1 litre** = **1000** cm^3 ?
How many litres are in 3000 cm^3 ? (1 litre = 1000 cm^3)
- Cara is making a triangular bunting flag for the school's Seachtain na Gaeilge display. The flag has a base of **12 cm** and a perpendicular height of **5 cm**. What is the area of the flag?
A triangle has a base of 12 cm and a perpendicular height of 5 cm. What is its area?

CHALLENGE

- Before Camogie training under the floodlights, Aoife estimates the length of a goalpost shadow as **146.5 cm**. She then measures it with a tape and gets **149 cm**. By how many centimetres is her estimate off?
- Tadhg is drawing a scale plan of the classroom on grid paper. He estimates the length of one bookshelf as **51.6 cm**, then measures it with his ruler as **60.3 cm**. By how much is his estimate off?