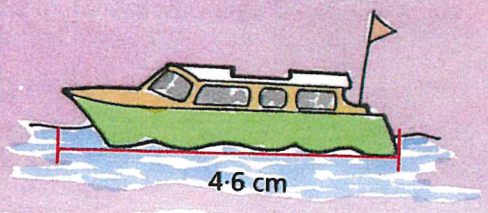
Boats

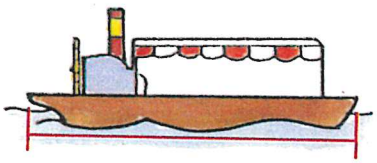
The **scaled length** of this model boat is 4·6 cm.
The **true length** is 4·6 × 6cm
= **27·6 cm**

Scale: 1 cm to 6 cm

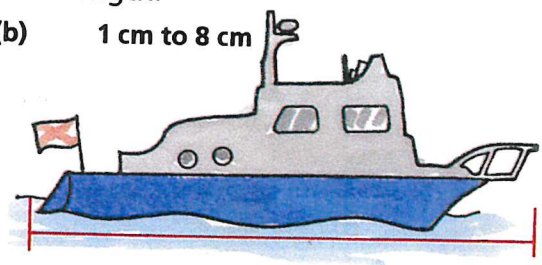


1 Each boat is drawn to a different scale.
Measure each red line, then calculate the true length.

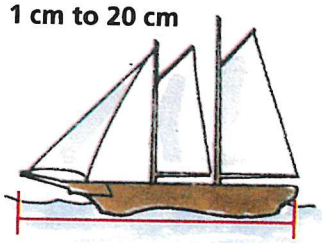
(a) 1 cm to 10 cm



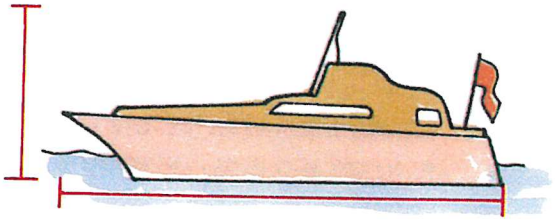
(b) 1 cm to 8 cm



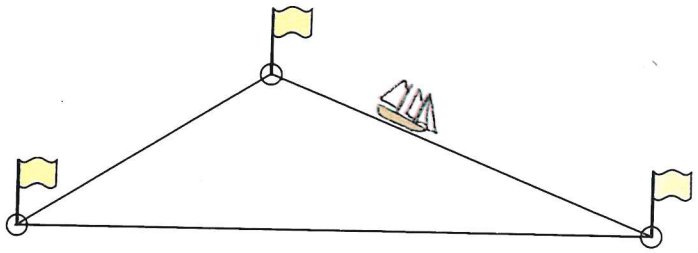
(c) 1 cm to 20 cm



(d) 1 cm to 12 cm



2 This sailing course is drawn to a scale of **1 cm to 150 cm**.
Find the true length of the course in **metres**.



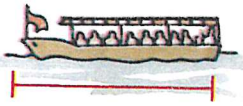
3 Find the true length of each boat in metres.

(a) 1 cm to 50 cm

(b) 1 cm to 80 cm

(c) 1 cm to 2 m

(d) 1 cm to 4 m



Sports Centre

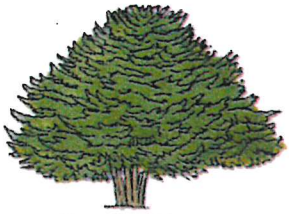
70
Length: drawing to scale

These trees grow near Avonside Sports Centre.
Each tree is drawn to a **different** scale.

Scots Pine
True height 30 m

Redwood
True height 40 m

European Larch
True height 50 m



English Yew
True height 10 m

Monkey Puzzle
True height 25 m

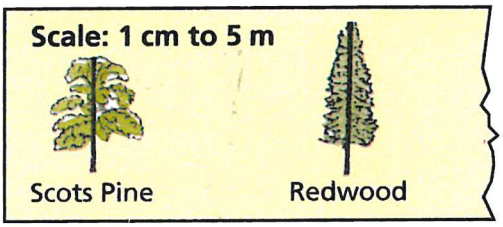
The park manager is making a poster to show all of the trees drawn to the **same** scale of **1 cm to 5 m**.
He calculates the **scaled height** of the Scots Pine like this:

5 m is represented by 1 cm

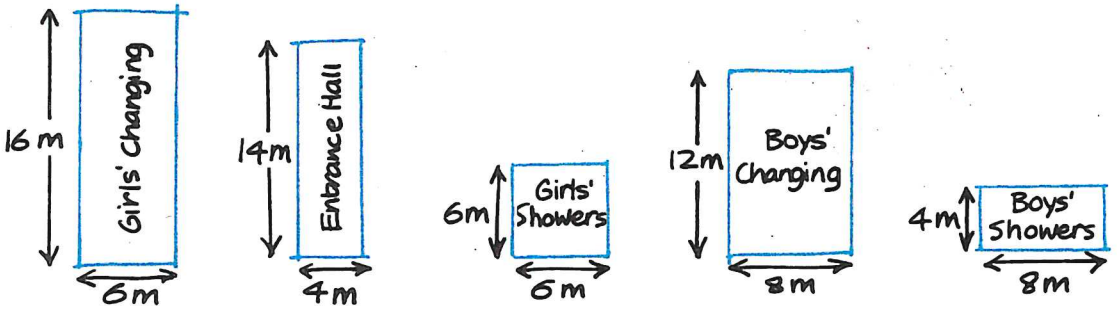
5 m ⟶ 1 cm
30 m ⟶ 30 ÷ 5 = 6 cm
The scaled height is **6 cm**.

1 **(a)** Calculate the **scaled heights** of the other trees.

(b) Design a poster like this.
Draw an accurate line for the height of each tree.

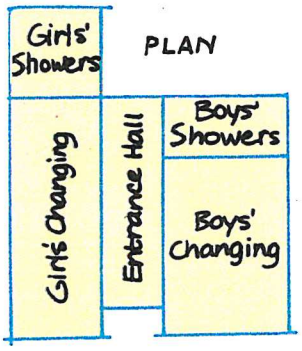


2 These rough sketches show the **true sizes** of the Sports Centre's new changing rooms.



(a) Calculate the **scaled** length and breadth of each room, using a scale of **1 cm to 2 m**.

(b) **Use centimetre squared paper.**
Make an accurate drawing of this plan to a scale of **1 cm to 2 m.**



Go to Workbook page 15.