National 4
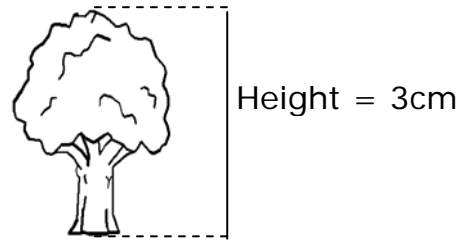## Homework Exercise 23
Scale Factor

Q1 This tree has been drawn to scale of: -
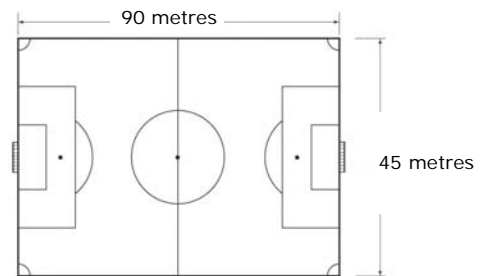
　　　　1cm = 2.5 m

What is the real height of the tree?

Height = 3cm

Q2 Make a scale drawing of this football pitch using a scale : -

1cm represents 10 metres

90 metres

45 metres

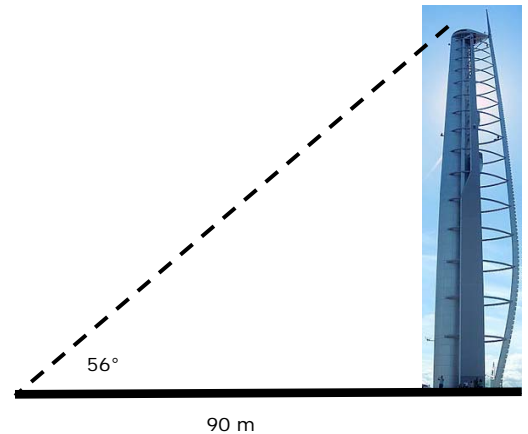**Q3** Glasgow tower is the tallest structure in Glasgow.

(a) Make a scale drawing of the tower in the picture shown using the scale: -

　　　　1cm = 9 metres

(b) Measure the height of the tower on your scale drawing.

(c) Now calculate the real height of the tower in metres

Glasgow tower holds the Guinness world record as the tallest building in the world capable of rotating 360 degrees. FACT!

56°

90 m

Q4 Bob is going to paint a space invader design onto his sons bedroom wall. He printed off a small version from the internet.

The size of the wall available to paint on is 120cm by 300cm

(a) Bob wants to keep the design in the same proportion as the printed one. Calculate the largest length and breadth he can make the design on the wall.

(b) Write down the scale factor he would be using.

Design

8 cm

12 cm

Wall

120 cm

300 cm