Scale Drawings and Maps

GCSE Mathematics • **Foundation Tier** • Grades 3–4 • Non-calculator

Name: _____ Class: _____ Total: _____ / 65

Show all your working. Marks are given for correct method as well as the final answer.

1. A scale drawing uses 1 cm to represent 2 m. Work out the real length of a wall drawn 6 cm long. **[2 marks]**



Scale: 1 cm represents 2 m

Answer: _____ **m**

2. Using the same scale, work out the real height of the room drawn 4 cm tall. **[2 marks]**



Scale: 1 cm represents 2 m

Answer: _____ **m**

3. A scale is 1 cm to 5 m. Work out the drawing length for a real distance of 45 m. **[2 marks]**

Answer: _____ **cm**

4. A model car is made to a scale of 1:50. The model is 9 cm long. Work out the real length, in metres. **[3 marks]**

Answer: _____ **m**

5. A model is made to a scale of 1:20. The real object is 3 m tall. Work out the model's height, in centimetres. **[3 marks]**

Answer: _____ **cm**

6. A map has a scale of 1:25 000. Work out the real distance, in kilometres, for 4 cm on the map. **[3 marks]**

Answer: _____ **km**

7. On a 1:25 000 map, work out the map distance for 3 km. **[3 marks]**

Answer: _____ **cm**

8. A map has a scale of 1:50 000. Work out the real distance for 7 cm, in kilometres. **[3 marks]**

Answer: _____ **km**

9. A drawing of a garden uses 1 cm to 3 m. The real garden is 24 m by 15 m. Work out the drawing's dimensions. **[3 marks]**

Answer: _____

10. A 12 m wall is drawn 4 cm long. Write the scale in the form 1 cm to n m. **[2 marks]**

Answer: _____

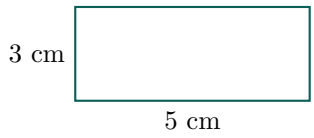
11. A 6 m room is drawn 15 cm long. Write the scale as a ratio in the form 1:n. **[3 marks]**

Answer: _____

12. A model plane has scale 1:72 and wingspan 50 cm. Work out the real wingspan, in metres, to 1 d.p. **[3 marks]**

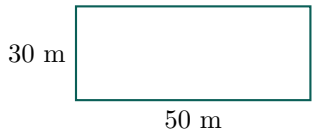
Answer: _____ **m**

13. A field is drawn as a rectangle 5 cm by 3 cm at 1 cm to 10 m. **[3 marks]**



Answer: _____ **m**

14. Using that field, work out its real area. **[3 marks]**



Answer: _____ **m²**

15. Explain why a scale of 1:100 makes a 2 m door only 2 cm tall on the drawing. **[2 marks]**

Answer: _____

16. Two towns are 8.5 cm apart on a 1:200 000 map. Work out the real distance in kilometres. **[3 marks]**

Answer: _____ **km**

17. A room measures 4.8 m by 3.6 m and is drawn at 1 cm to 60 cm.

(a) Work out the drawing's dimensions in centimetres. **[3 marks]**

(b) Work out the drawing's area. **[2 marks]**

Answer: _____

18. A footpath is 6 cm long on a 1:25 000 map. A walker covers 4 km/h.

(a) Work out the real length of the path in kilometres. **[3 marks]**

(b) Work out how long the walk takes, in minutes. **[3 marks]**

Answer: _____

19. A architect's plan uses 1:50. A room on the plan is 12 cm by 9 cm.

(a) Work out the real dimensions in metres. **[3 marks]**

(b) Work out the real floor area. **[3 marks]**

Answer: _____

20. On a map, 1 cm represents 2 km.

(a) Write this scale in the form 1:n. **[3 marks]**

(b) Work out the map distance for 15 km. **[2 marks]**

Answer: _____

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