Proportion/scaling of objects

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. A $1:200$ plan shows a 6 cm wall. Find real length. [2 marks]

$6 \times 200 = 1200$ cm $= 12$ m.

Answer: 12 m

2. A $1:25$ model boat is 32 cm long. Find real length. [2 marks]

$32 \times 25 = 800$ cm $= 8$ m.

Answer: 8 m

3. Enlarge a 15 cm length by factor 1.2. Find the new length. [2 marks]

$15 \times 1.2 = 18.$

Answer: 18 cm

4. A 9 m wall is drawn as 18 cm. Find the scale. [2 marks]

900 cm compared with 18 cm gives $18:900 = 1:50.$

Answer: $1:50$

5. Similar triangles have matching sides 4 and 10 cm. A 7 cm side of the smaller matches what larger length? [2 marks]

$k = \frac{10}{4} = 2.5.$

$7 \times 2.5 = 17.5.$

Answer: 17.5 cm

6. A 20 by 12 cm picture is reduced to width 15 cm without distortion. Find height and justify your factor. [3 marks]

$k = \frac{15}{20} = 0.75$ for all corresponding lengths.

$12 \times 0.75 = 9.$

Answer: 9 cm