Similar shapes and corresponding sides

6 questions | 14 marks

Equivalent correct methods earn the corresponding marks.

1. A 4 cm side becomes 10 cm in a similar shape. Find the scale factor. [2 marks]

$k = 10/4 = 2.5$.

Answer: 2.5.

2. A similar enlargement has factor 3. A side is originally 7 cm. Find its image length. [2 marks]

$7(3) = 21$ cm.

Answer: 21 cm.

3. A shape is reduced by factor $\frac{1}{2}$. Its original side is 18 mm. Find the new length. [2 marks]

$18(1/2) = 9$ mm.

Answer: 9 mm.

4. Similar rectangles have widths 8 cm and 12 cm. The smaller has height 10 cm. Find the larger height. [3 marks]

Factor is $12/8 = 1.5$.

Height is $10(1.5) = 15$ cm.

Answer: 15 cm.

5. A 30 cm model side represents an actual side of 1.2 m. Find the scale factor from model to actual. [3 marks]

Convert 1.2 m to 120 cm.

$k = 120/30 = 4$.

Answer: 4.

6. A triangle is enlarged by factor 4. One original angle is 50°. What is the corresponding image angle? Explain. [2 marks]

Similarity preserves corresponding angles; only lengths are scaled.

Answer: 50°.