Multiple choice questions - Similarity and enlargement

Year: Year 9 · 10

Question 1 A shape is enlarged with scale factor 3. A side of 5 cm becomes:

- ◯ **A.** 8 cm
- ◯ **B.** 15 cm
- ◯ **C.** 1.67 cm
- ◯ **D.** 125 cm

Question 2 Two similar shapes have sides 8 cm and 12 cm. The scale factor from small to large is:

- ◯ **A.** 4
- ◯ **B.** 1.5
- ◯ **C.** 0.67
- ◯ **D.** 20

Question 3 Which is NOT needed to describe an enlargement?

- ◯ **A.** scale factor
- ◯ **B.** centre
- ◯ **C.** colour
- ◯ **D.** both scale factor and centre

Question 4 Which condition proves two triangles congruent?

- ◯ **A.** AAA
- ◯ **B.** SSS
- ◯ **C.** AAS and AAA
- ◯ **D.** none

Question 5 A scale factor of 1/2 makes a shape:

- ◯ **A.** bigger
- ◯ **B.** smaller
- ◯ **C.** the same
- ◯ **D.** negative

Question 6 In an enlargement of scale factor 2, angles are:

- ◯ **A.** doubled
- ◯ **B.** halved

- ◯ **C.** unchanged
- ◯ **D.** increased by 2°

Question 7 Rectangles 2×3 and 4×6 are:

- ◯ **A.** congruent
- ◯ **B.** similar but not congruent
- ◯ **C.** not similar
- ◯ **D.** equal in area

Question 8 A model car is 1 : 20 scale and is 20 cm long. The real car is:

- ◯ **A.** 1 m
- ◯ **B.** 4 m
- ◯ **C.** 2 m
- ◯ **D.** 40 cm

Question 9 Enlarging (3, 2) with scale factor 4, centre the origin, gives:

- ◯ **A.** (7, 6)
- ◯ **B.** (12, 8)
- ◯ **C.** (12, 2)
- ◯ **D.** (0.75, 0.5)

Question 10 The perimeter of a shape is 20 cm. After enlargement with scale factor 3 it is:

- ◯ **A.** 23 cm
- ◯ **B.** 60 cm
- ◯ **C.** 180 cm
- ◯ **D.** 6.7 cm

Answer grid - Similarity and enlargement

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Question	Answer	Explanation
1	**B**	5 × 3.
2	**B**	12 ÷ 8.
3	**C**	Colour is irrelevant.
4	**B**	AAA only proves similarity.
5	**B**	Lengths are halved.
6	**C**	Angles stay the same.
7	**B**	Scale factor 2.
8	**B**	20 × 20 = 400 cm.
9	**B**	Multiply both coordinates.
10	**B**	Lengths multiply by 3.