SIMILAR SHAPES

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. Shape A: side = 4cm, Shape B: corresponding side = 8cm | Scale factor = 2

2. Shape A: side = 10cm, Shape B: corresponding side = 5cm | Scale factor = 0.5

3. Shape A: side = 6cm, Shape B: corresponding side = 18cm | Scale factor = 3

4. Shape A: side = 15cm, Shape B: corresponding side = 3cm | Scale factor = 0.2

5. Shape A: side = 7cm, Shape B: corresponding side = 21cm | Scale factor = 3

6. Shape A: side = 12cm, Shape B: corresponding side = 4cm | Scale factor = 0.333

7. Shape A: side = 9cm, Shape B: corresponding side = 27cm | Scale factor = 3

8. Shape A: side = 25cm, Shape B: corresponding side = 5cm | Scale factor = 0.2

9. Shape A: side = 8cm, Shape B: corresponding side = 12cm | Scale factor = 1.5

10. Shape A: side = 14cm, Shape B: corresponding side = 7cm | Scale factor = 0.5

11. Shape A: side = 11cm, Shape B: corresponding side = 33cm | Scale factor = 3

12. Shape A: side = 20cm, Shape B: corresponding side = 5cm | Scale factor = 0.25

13. Shape A: side = 16cm, Shape B: corresponding side = 24cm | Scale factor = 1.5

14. Shape A: side = 18cm, Shape B: corresponding side = 6cm | Scale factor = 0.333

15. Shape A: side = 22cm, Shape B: corresponding side = 11cm | Scale factor = 0.5

16. Shape A: side = 30cm, Shape B: corresponding side = 10cm | Scale factor = 0.333

17. Shape A: side = 13cm, Shape B: corresponding side = 39cm | Scale factor = 3

18. Shape A: side = 28cm, Shape B: corresponding side = 7cm | Scale factor = 0.25

19. Shape A: side = 17cm, Shape B: corresponding side = 51cm | Scale factor = 3

20. Shape A: side = 24cm, Shape B: corresponding side = 8cm | Scale factor = 0.333

21. Shape A: side = 35cm, Shape B: corresponding side = 7cm | Scale factor = 0.2

22. Shape A: side = 19cm, Shape B: corresponding side = 57cm | Scale factor = 3

23. Shape A: side = 26cm, Shape B: corresponding side = 13cm | Scale factor = 0.5

24. Shape A: side = 32cm, Shape B: corresponding side = 8cm | Scale factor = 0.25

25. Shape A: side = 21cm, Shape B: corresponding side = 63cm | Scale factor = 3

26. Shape A: side = 40cm, Shape B: corresponding side = 10cm | Scale factor = 0.25

27. Shape A: side = 27cm, Shape B: corresponding side = 9cm | Scale factor = 0.333

28. Shape A: side = 33cm, Shape B: corresponding side = 11cm | Scale factor = 0.333

29. Shape A: side = 45cm, Shape B: corresponding side = 15cm | Scale factor = 0.333

30. Shape A: side = 50cm, Shape B: corresponding side = 10cm | Scale factor = 0.2

MASTER QUESTIONS

M1. Two similar triangles have corresponding sides of 6cm and 9cm. What is the scale factor? | Scale factor = 1.5

M2. A model car is 18cm long and the real car is 4.5m long. What is the scale factor? | Scale factor = 0.04

M3. Two similar rectangles have widths of 12cm and 8cm. Find the scale factor.

Scale factor = 0.667

M4. A map uses a scale where 2cm represents 5km. What is the scale factor?

Scale factor = 0.0000004

M5. Two similar pentagons have corresponding sides of 15mm and 45mm. Calculate the scale factor.

Scale factor = 3

M6. A photograph is enlarged from 10cm by 15cm to 30cm by 45cm. What is the scale factor?

Scale factor = 3

M7. Two similar triangles have areas of $16cm^2$ and $64cm^2$. Find the scale factor of their sides.

Scale factor = 2

M8. A model building is 25cm tall and the actual building is 50m tall. Determine the scale factor.

Scale factor = 0.005

M9. Two similar hexagons have perimeters of 24cm and 36cm. Calculate the scale factor.

Scale factor = 1.5

M10. A blueprint shows a room as 8cm by 6cm when the actual room is 4m by 3m. Find the scale factor.

Scale factor = 0.02