# Ratio and Proportion

## Similar Shapes

**9a.** True or false? Shape A has been increased by a scale factor of 2 to create shape B.
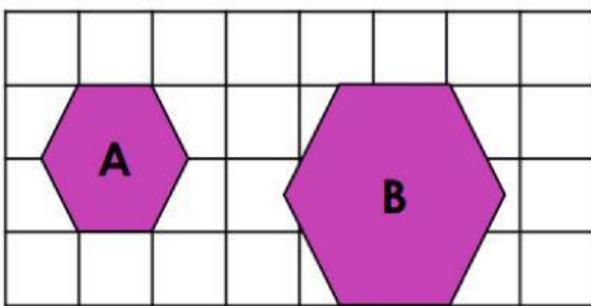


**9b.** True or false? Shape A has been increased by a scale factor of 1.5 to create shape B.
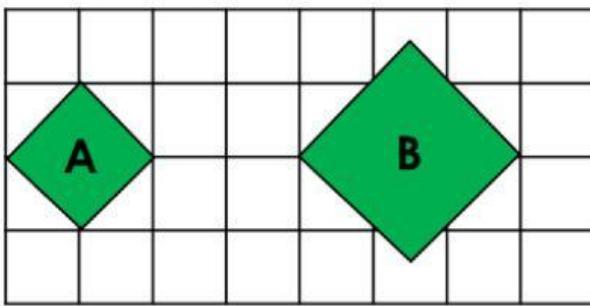


**10a.** Ashton says he has enlarged his shape by a scale factor of 3.5. Shape B is his new shape.

1.2cm  A
0.8cm

4.2cm  B
2.8cm

Is he correct?

*Not to scale*   VF

**10b.** Tahani says she has enlarged her shape by a scale factor of 2.5. Shape B is her new shape.

1.4cm  A
0.9cm

4.2cm  B
2.7cm
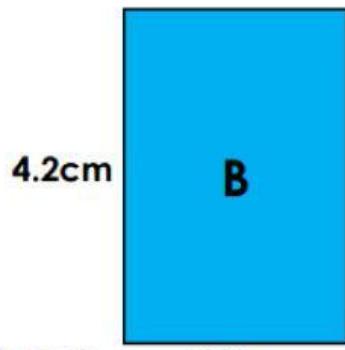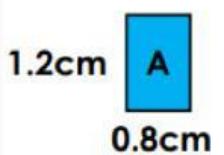
Is she correct?

*Not to scale*   VF

**11a.** Shape B has been scaled from shape A. Find the missing lengths.

1.4cm
0.8cm  A
1.6cm

A. _____cm

B. _____cm  B

5.6cm
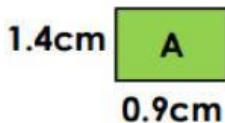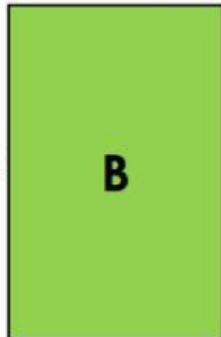
*Not to scale*   VF

**11b.** Shape B has been scaled from shape A. Find the missing measurements.

0.9cm
A   0.5cm
1.2cm

3.15cm

A.
_____cm

B

B. _____cm

*Not to scale*   VF

**LIVEWORKSHEETS**
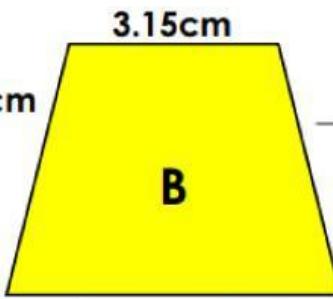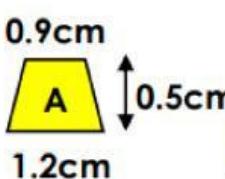
**2. The shapes below are similar. Use the information given to identify the scale factor and the missing length.**

A. [____ cm]
4 cm

B. [3.5 cm]
14 cm
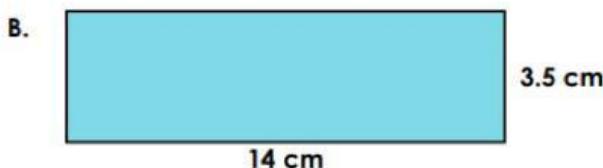
Shape A has been enlarged by a scale factor of _____ to create shape B.

*Not to scale*                                    VF

**5. Dean has enlarged shape A to create shape B. He says,**

*If I enlarge shape B by the same scale factor, the new width would be 105 cm because the scale factor is 7.5, and 7.5 x 15 = 105.*

A | 2 cm
4 cm

B | 15 cm
30 cm
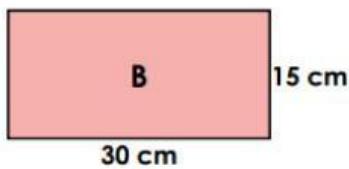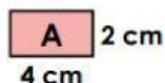
Is Dean correct? Prove it.

*Not to scale*                                    R

**3. Complete the missing values in the table below.**

| | Starting length | Starting width | Enlarged length | Enlarged width | Scale factor |
|---|---|---|---|---|---|
| A. | 6 cm | 2 cm | 15 cm | | |
| B. | | 5 cm | 18 cm | 30 cm | |
| C. | 4 cm | | 18 cm | 9 cm | |
| D. | 8 cm | 4 cm | 28 cm | | |

**6. When enlarged, the perimeter of the shape below increases to 198 cm.**

[6 cm]
12 cm
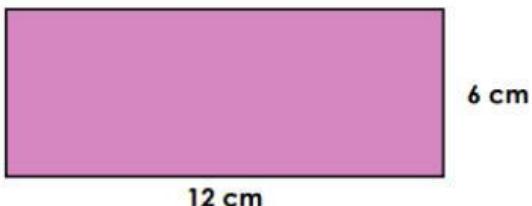
What scale factor has the shape been enlarged by? Explain your answer.

**8. A cartographer has been making scale copies of different maps. Complete the table below.**

| | Perimeter of original map (m) | Perimeter of new map (m) | Scale Factor increased by |
|---|---|---|---|
| Map A | 0.8 | | 5 |
| Map B | 3 | 7.5 | |
| Map C | 6 | 3 | |
| Map D | | 13 | 5 |