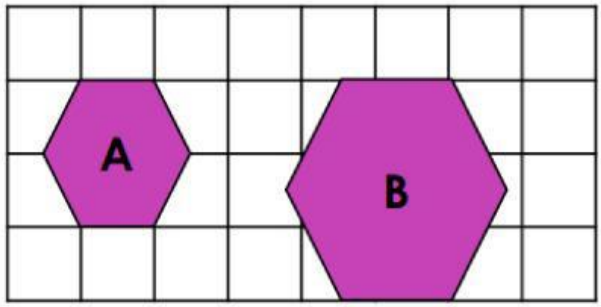
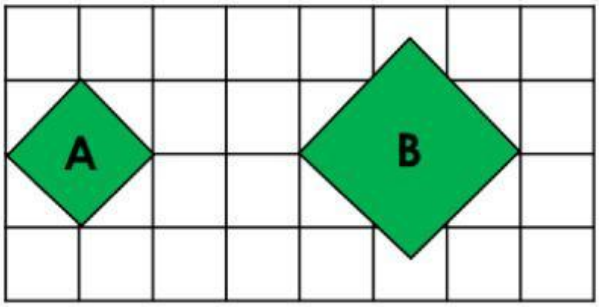
Ratio and Proportion

Similar Shapes

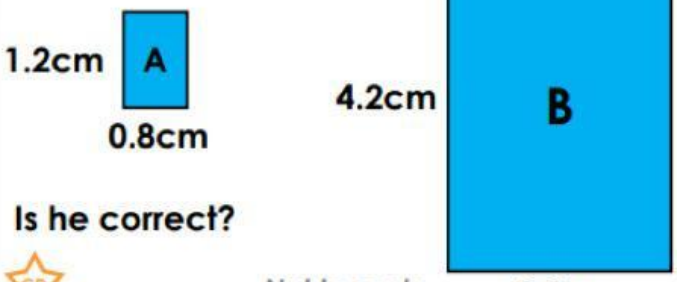
9a. True or false? Shape A has been increased by a scale factor of 2 to create shape B.



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.

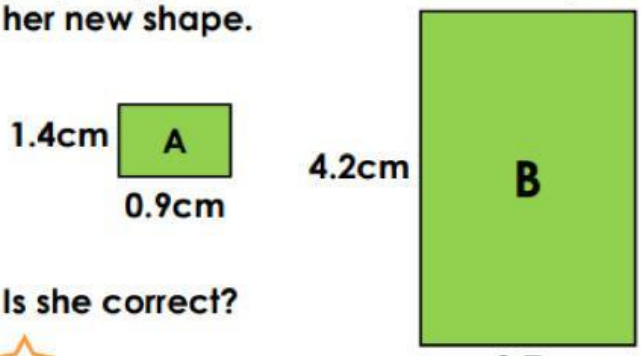


Is he correct?

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.

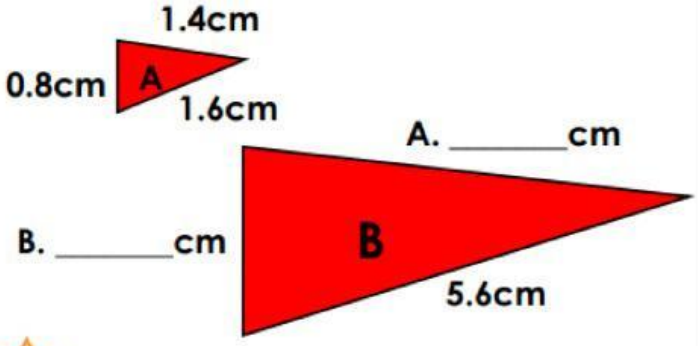


Is she correct?

Not to scale

VF

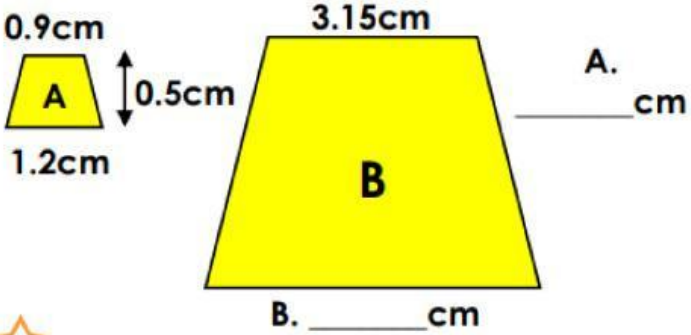
11a. Shape B has been scaled from shape A. Find the missing lengths.



Not to scale

VF

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



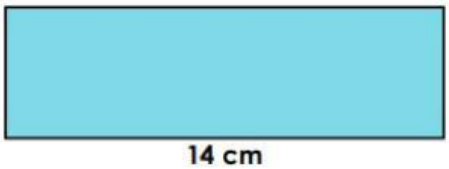
Not to scale

VF

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

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		

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

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