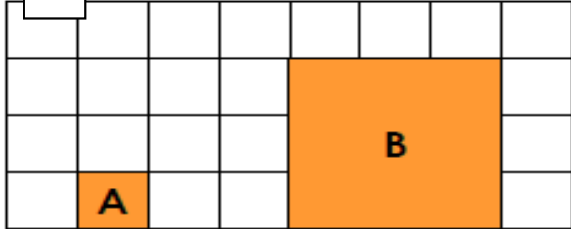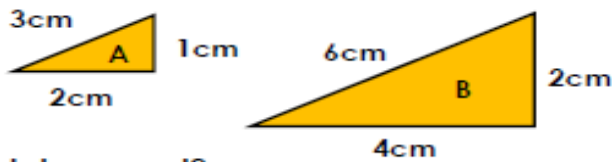# LO: To calculate the scale factor (bronze)-answers

1a. Complete the sentence below. Shape A has been increased by a scale factor of __**3**__ to create shape B.

B

A

2a. Will says he has enlarged his shape by a scale factor of 2. Shape B is his new shape.
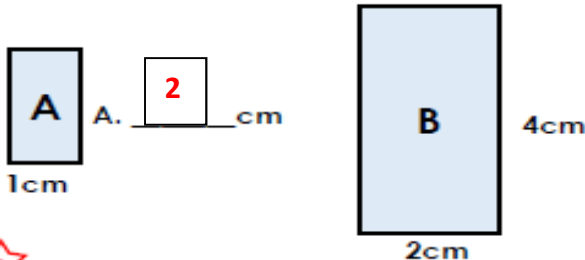
3cm
A 1cm
2cm

6cm
B 2cm
4cm

Is he correct?

Yes

Not to scale

3a. Rectangle B has been scaled from rectangle A. Find the missing length.
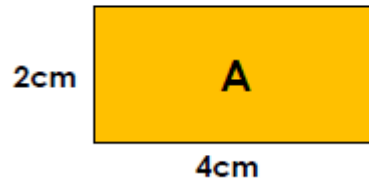
A
A. __**2**__ cm
1cm

B 4cm
2cm

Not to scale

4 Shape A has been enlarged to create shape B.

> Shape B has a perimeter of 48cm.

2cm **A**
4cm

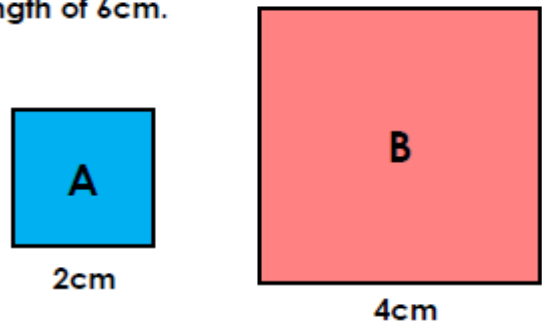Identify which scale factor has been used. **4**

not to scale

5 Sharon is enlarging shapes by a scale factor of 2 each time. She says that if she created shape C, one side would have a length of 6cm.

A
2cm

B
4cm

Do you agree? Explain your answer.
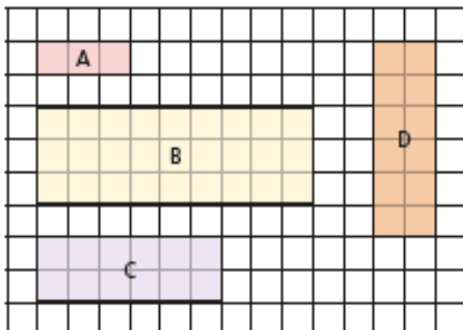
No, at scale factor of 2 it would be 8cm

6 Complete the sentences.

A
B
D
C

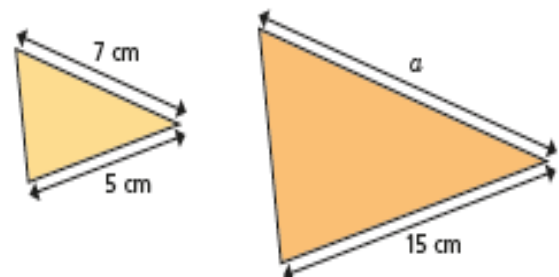Shape B is an enlargement, by a scale factor of **3** of shape A.

Shape C is an enlargement, by a scale factor of **2** of shape A.

Shape D is an enlargement, by a scale factor of **2** of shape A.

7 The two triangles are similar.

Find the length of a.

7 cm
5 cm

a
15 cm

a =21cm

LO: To calculate the scale factor (silver)

1 True or false? Shape B has been increased by a scale factor of 2.5 to create shape A.

A

B

True

VF

2 Evelyn says she has enlarged her shape by a scale factor of 2.5. Shape B is her new shape.

1cm A 1cm

3cm B 3cm

Is she correct?

No – scale factor = 3

VF

3 Triangle B has been scaled from triangle A. Find the missing lengths.

2cm A 6cm 4cm

B. **15** cm

A. **5** cm

B 10cm

Not to scale

VF

4 Bobby has enlarged shape A to create shape B. He says if he created shape C using the same scale factor, one side would have a length of 8cm.

B

A

1cm   4cm

Do you agree? Explain your answer.

Not to scale   PS

5 When enlarged, the perimeter of the shape below increases to 49cm.

5cm

2cm

What scale factor has the shape been increased by? Explain your answer.

3.5, because...

R

6

The two triangles are similar.

Find the area of the smaller triangle.

30 cm

4 cm   24 cm

area **10cm²**

7

These two children's toys are similar.

Find the length marked y.

20 cm

18 cm

5 cm

y

y=4.5

LO: To calculate the scale factor (gold)-answers

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

A | B

False, scale factor=1.5

2 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?

No, because…

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

1.4cm
0.8cm A
1.6cm

A. **4.9** cm

B. **2.8** cm

B

5.6cm

Not to scale

4 Amanda has enlarged shape A to create shape B. She says if she created shape C using the same scale factor, one side would have a length of 7.2cm.

A

B

2.4cm   3.6cm

Do you agree? Explain your answer.

No, scale factor of 1.5 so side = 5.4

5 One side of this square is 4.2cm. When enlarged, the perimeter increases to 42cm.

What scale factor has the shape been increased by? Explain your answer.

2.5, because… scale

6

The rectangle is enlarged by a scale factor.

The perimeter of the enlarged rectangle is 64 m.

What is the scale factor of enlargement?

2.8 m

5.2 m

scale factor = **4**

7 The diagram shows three similar triangles.

Calculate the missing values.

a

37°

6 mm

b   21 mm

18 mm   c

53°   d

27 mm

$a =$ **7mm** $b =$ **53** $c =$ **37** $d =$ **31.5mm**