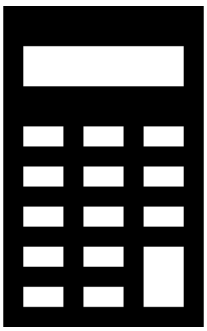
AQA, OCR, Edexcel

GCSE

GCSE Maths

Similar Shapes

Name:



Guidance

1. Read each question carefully.
2. Don't spend too long on each question.
3. Attempt every question.
4. Always show your workings.

Revise GCSE Maths:
www.MathsMadeEasy.co.uk/gcse-maths-revision/

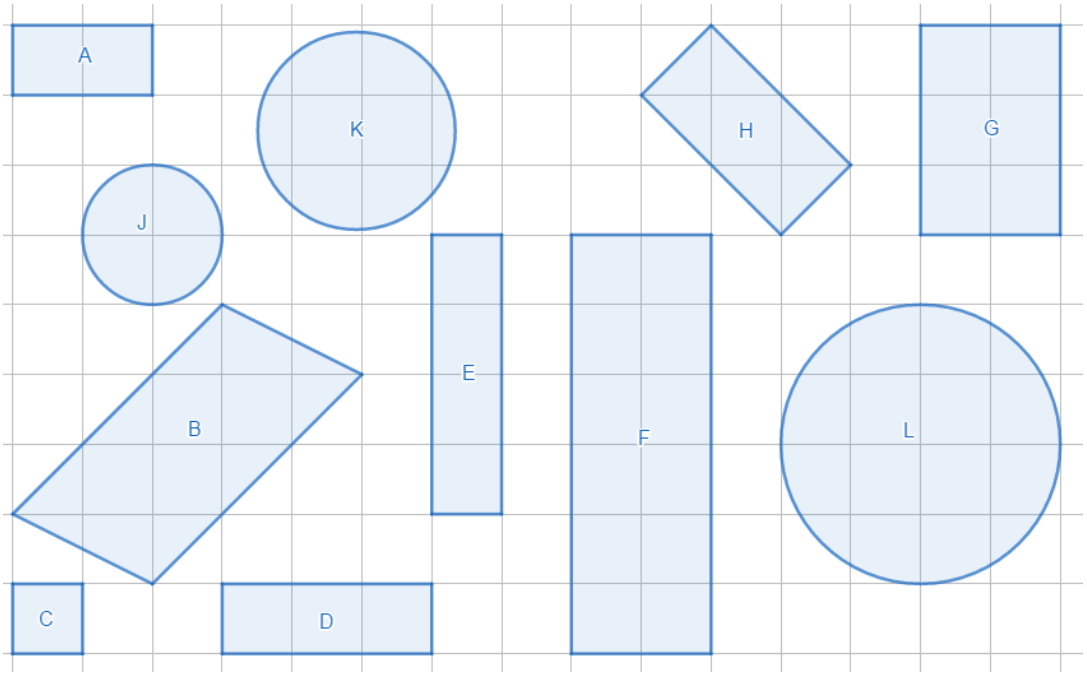
1. Define the term “similar shape”.

……

……

……

From the shapes below find two pairs and one triplet of similar shapes.



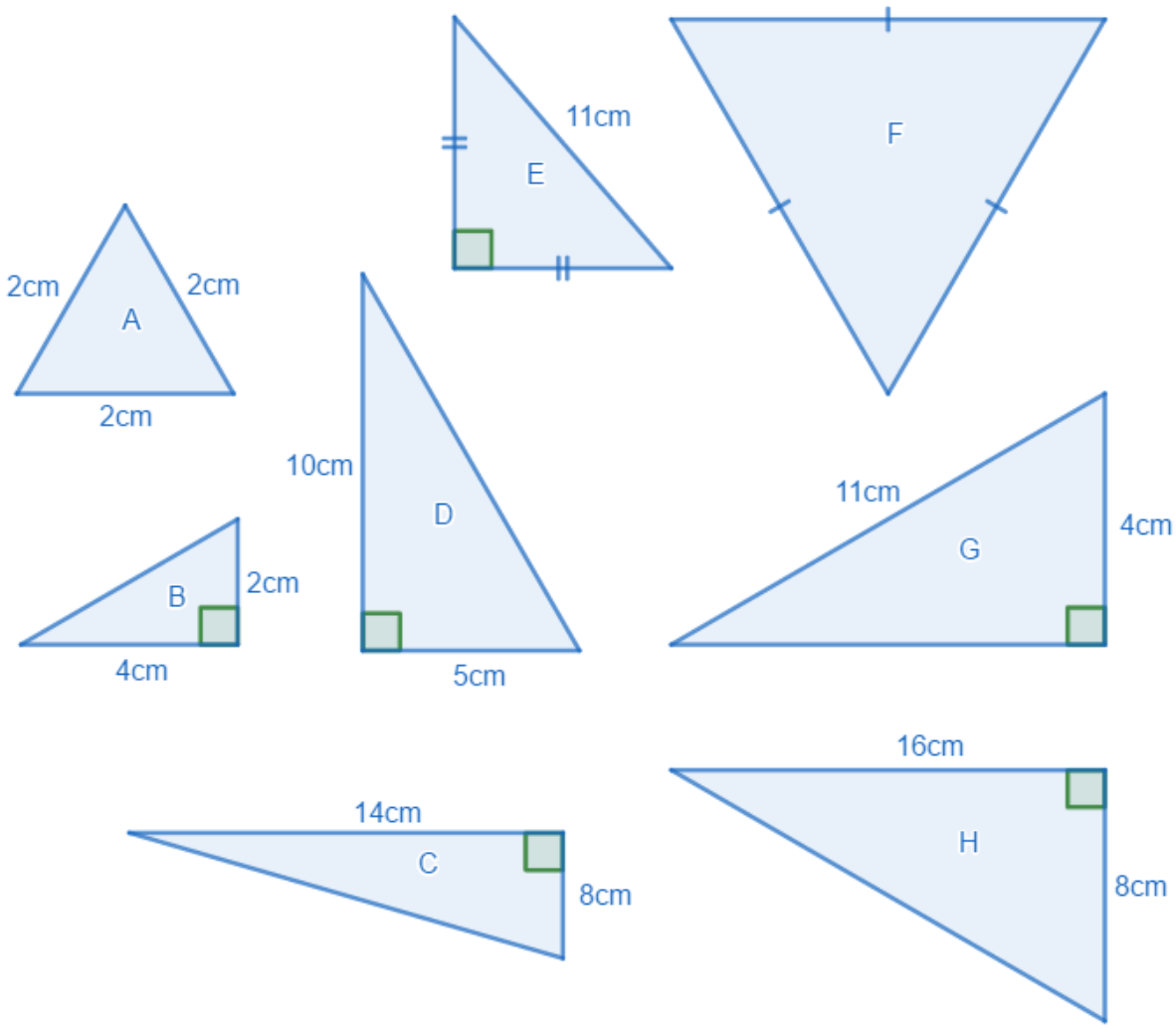
…… and ……

…… and ……

…… and …… and ……

(4 marks)

2. From the shapes below find one pair and triplet of similar triangles

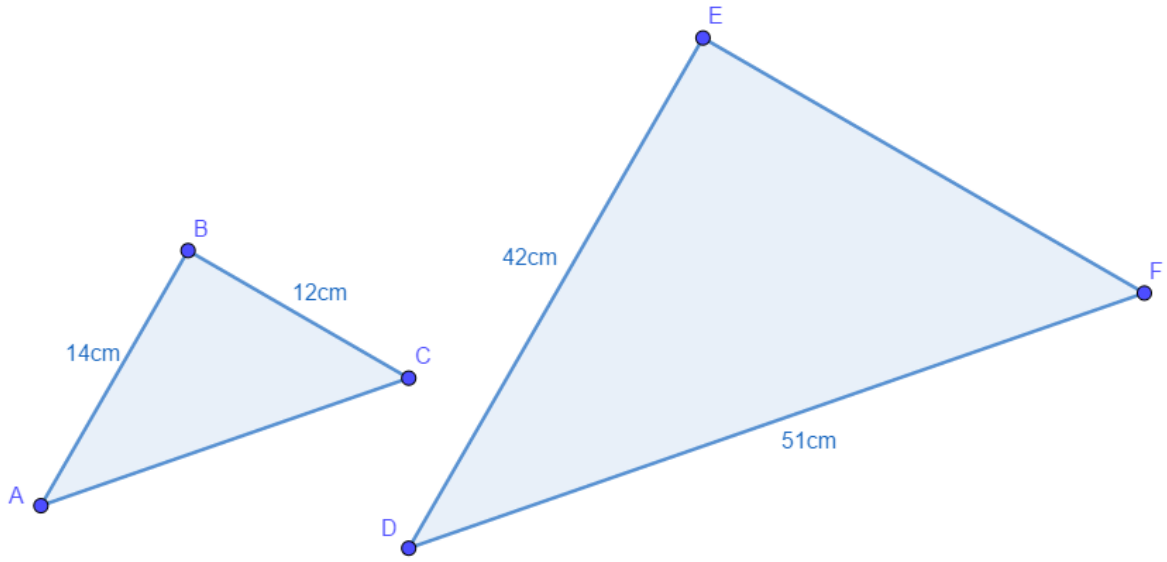


…… and ……

…… and …… and ……

(3 marks)

3. The two triangles below are similar, where A relates to D, B relates to E, and C relates to F.



What is the scale factor or the two triangles? ……

Using the scale factor, calculate EF

……

EF = ……cm

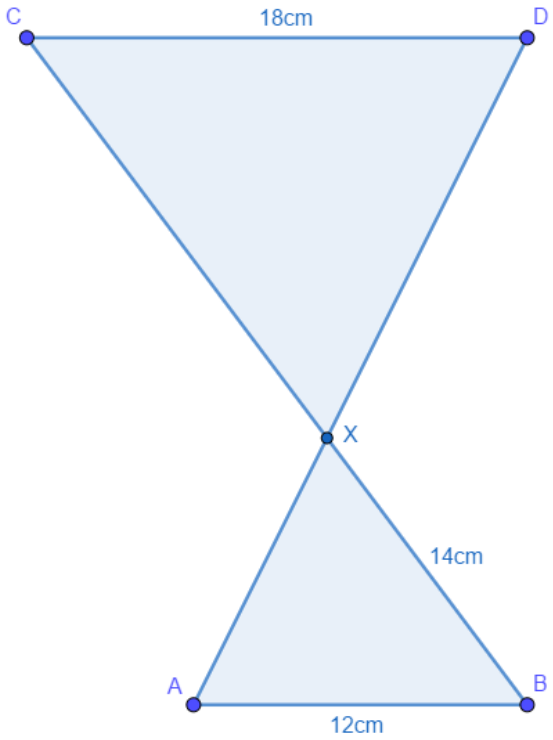
Using the scale factor, calculate AC

……

AC = ……cm

(3 marks)

4. In the diagram below the triangles XCD and XAB are similar.



What is the scale factor of the triangles? ……..

Calculate the length XC

……..

……..

XC = ……cm

Given that AD = 25cm, find the values of AX and XD.

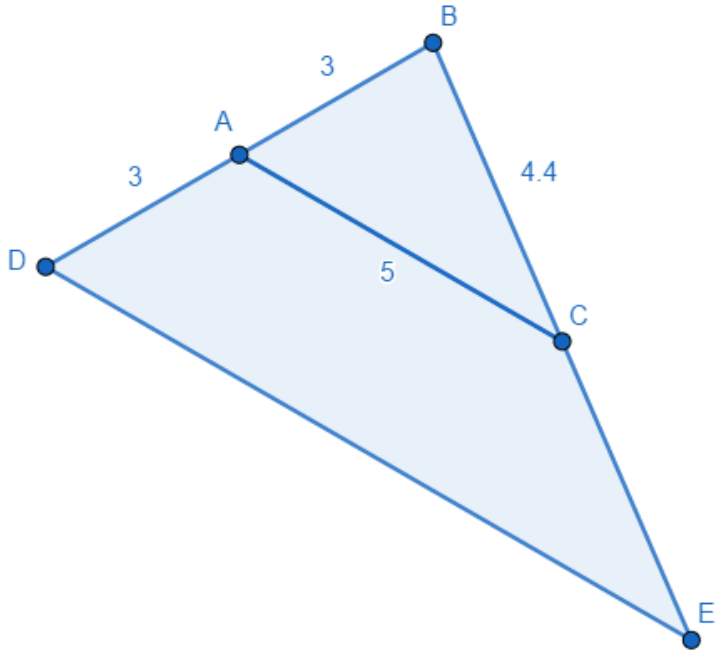
……..

……..

AX = ……cm , XD = ……cm

(4 marks)

5. Triangles BCA and BED are mathematically similar. Write down the scale factor.



a) Scale factor = ……

b) Use the scale factor to calculate both additional sides.

……

……

……

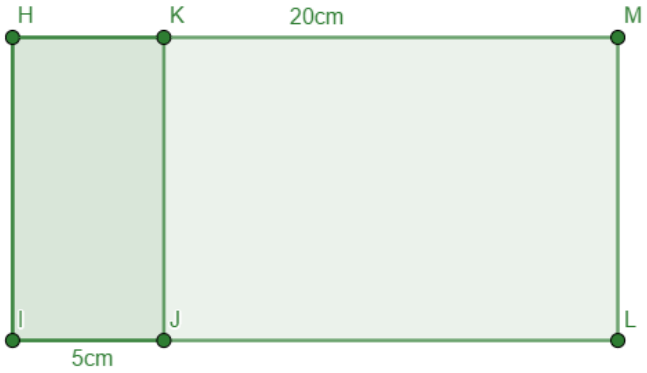
(3 marks)

6. ABCD and AGFE are mathematically similar.

What is the scale factor of the two rectangles? ……..

What is the scale factor of the area of the two rectangles? ……..

In the diagram below, IJKH and ILMH are mathematically similar.



Show that the scale factor is 2.

……

……

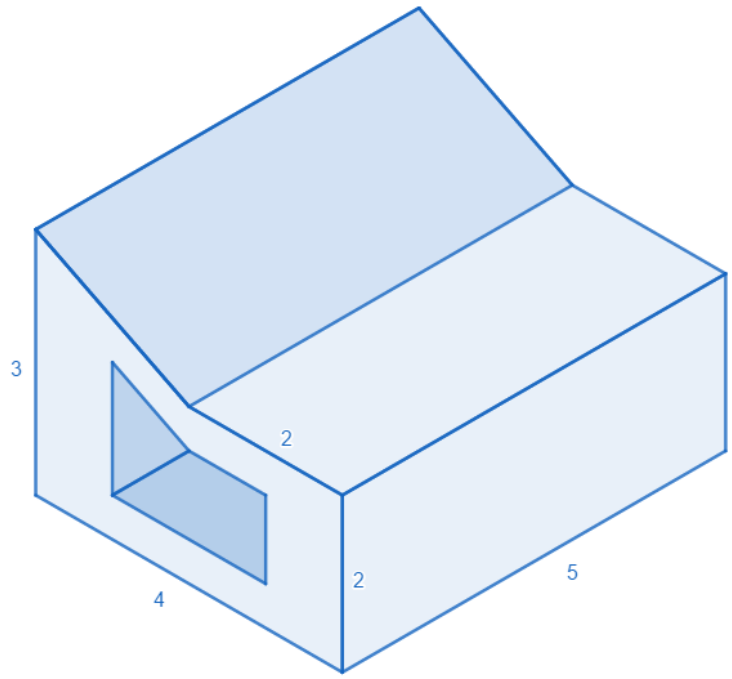
……

……

……

(2 marks, 3 marks)

7. The solid below has had a portion of it removed. This section is mathematically similar to the original solid, but its length scale-factor is 0.5



What is the volume of the solid with this portion removed?

……

……

……

……

……

……

……

……

Volume = ……

(4 marks)