

Similarity (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

Name:	
Total Marks:	

1. The areas of two rectangles A and B are in the ratio 1 : 3 respectively.

Rectangle A measures 4m by 3m.

(a) (i) Give a possible pair of values for the length and width of rectangle B.

Length = Width = [3]

(ii) Give a different possible pair of values for the length and width of rectangle B.

Length = Width = [1]

(b) Are the two rectangles you have identified in part (a) similar?

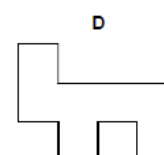
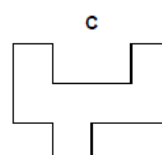
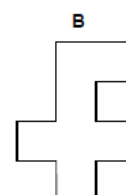
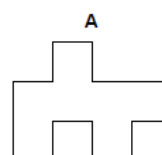
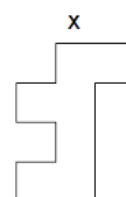
You must give a reason for your answer.

[1]

2. Which shape is congruent to shape X?

Circle the correct letter.

[1]



3. Which of these is not used to prove that triangles are congruent?

Circle your answer.

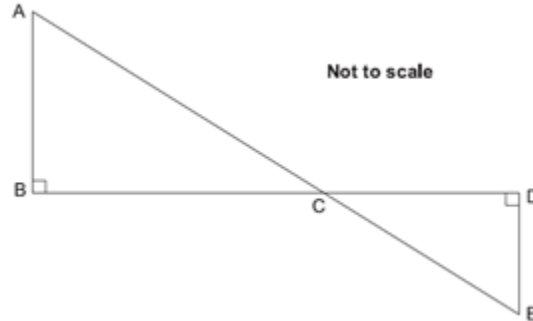
SSS

SAS

AAA

RHS

4. In the diagram below, AE and BD are straight lines.



(a) Show that triangles ABC and EDC are similar.

[3]

(b) The length DE is 3.5 m.

The ratio $BC : CD = 3 : 1$.

Find the length AB.

..... m [2]

5. The smallest angle of a triangle is 25°

The triangle is enlarged by scale factor 3

Ben says,

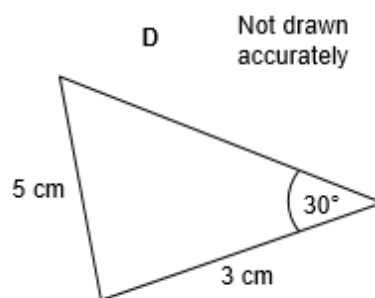
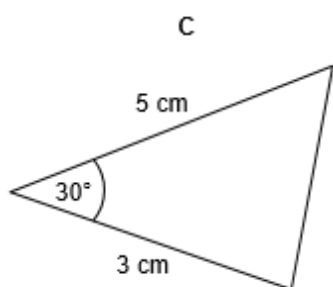
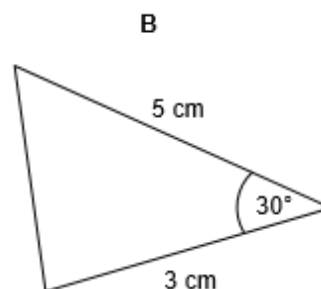
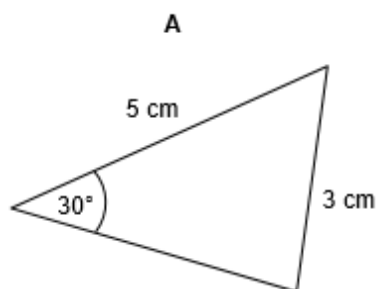
"The smallest angle of the enlarged triangle is 75° because $25 \times 3 = 75$ "

Is Ben right?

Explain your answer.

[1]

6. Here are four triangles.



a) Which two triangles are congruent? Circle your answers.

A

B

C

D

[1]

b) Circle the reason for your answer to part (a).

SSS

ASA

SAS

RHS

[1]

CREDITS AND NOTES

Question	Awarding Body
1	WJEC Eduqas
2	AQA
3	AQA
4	OCR
5	Pearson Edexcel

Notes:

These questions have been retyped from the original sample/specimen assessment materials and whilst every effort has been made to ensure there are no errors, any that do appear are mine and not the exam board s (similarly any errors I have corrected from the originals are also my corrections and not theirs!).

Please also note that the layout in terms of fonts, answer lines and space given to each question does not reflect the actual papers to save space.

These questions have been collated by me as the basis for a GCSE working party set up by the GLOW maths hub - if you want to get involved please get in touch. The objective is to provide support to fellow teachers and to give you a flavour of how different topics "could" be examined. They should not be used to form a decision as to which board to use. There is no guarantee that a topic will or won't appear in the "live" papers from a specific exam board or that examination of a topic will be as shown in these questions.



Links:

AQA <http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>

OCR <http://ocr.org.uk/gcsemaths>

Pearson Edexcel <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

WJEC Eduqas <http://www.eduqas.co.uk/qualifications/mathematics/gcse/>

Contents:

This version contains questions from:

AQA – Sample Assessment Material, Practice set 1 and Practice set 2

OCR – Sample Assessment Material and Practice set 1

Pearson Edexcel – Sample Assessment Material, Specimen set 1 and Specimen set 2

WJEC Eduqas – Sample Assessment Material