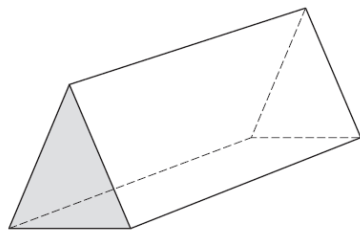# 2-D Shapes & 3-D Forms
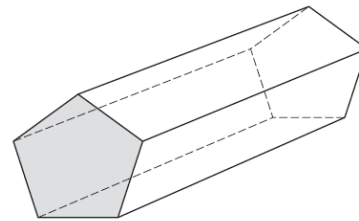
A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

Name:	
Total Marks:	

1. These prisms have different shapes as end faces.

Triangle   Pentagon

(a) Complete this table.

Shape of end face	Number of faces	Number of edges	Number of vertices
Triangle (3 sides)	5	9	6
Rectangle (4 sides)	....	....	8
Pentagon (5 sides)	....	15	10
Hexagon (6 sides)	8	18	....

[2]

(b) How many edges and vertices does a prism with a 100-sided end face have?

(b) edges ....

vertices ....

[2]
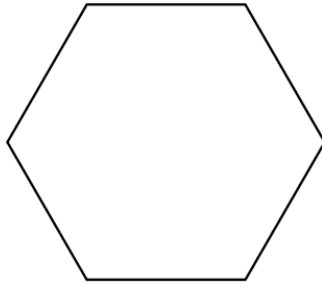
(c) F is the number of faces in a prism.

N is the number of sides of its end face.

Write down a formula connecting F and N.

(c) .... [2]

2. (a) Write down the mathematical name of this shape.

(a) .... [1]

(b) How many vertices does a cube have?

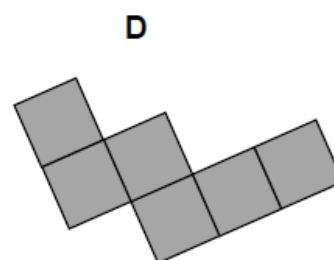(b) .... [1]
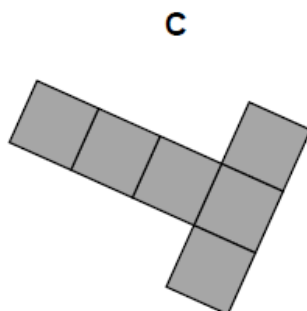
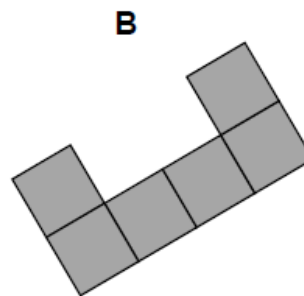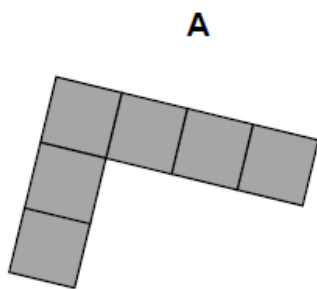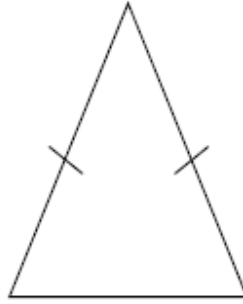(c) Sketch an isosceles triangle.

Mark the triangle to show that it is isosceles.

[1]

3. Which of these is the net of a cube?

Circle the correct letter.

[1]

A

B

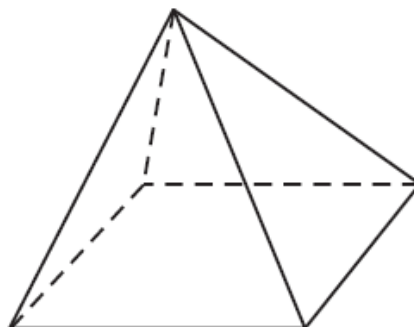
C

D

4. This triangle is drawn accurately.

What type of triangle is it?

Tick two boxes.

acute-angled ☐

obtuse-angled ☐

equilateral ☐

isosceles ☐

scalene ☐

[1]

5. Here is a square-based pyramid.
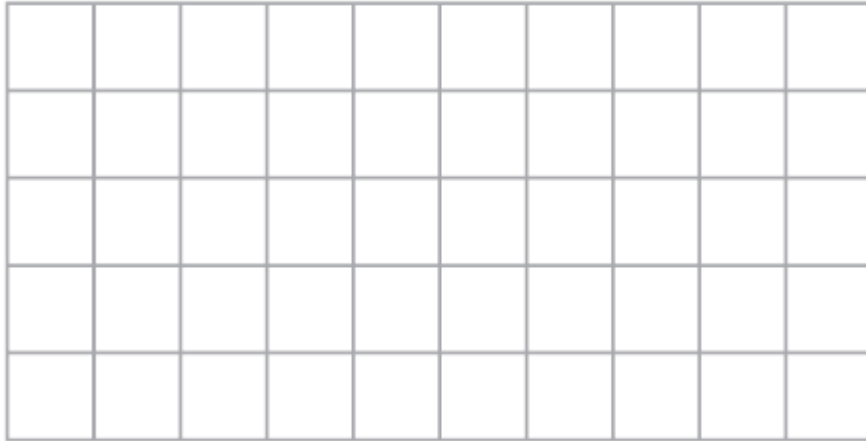
(i) How many faces does the pyramid have?

....

(ii) How many edges does the pyramid have?

....

[2]

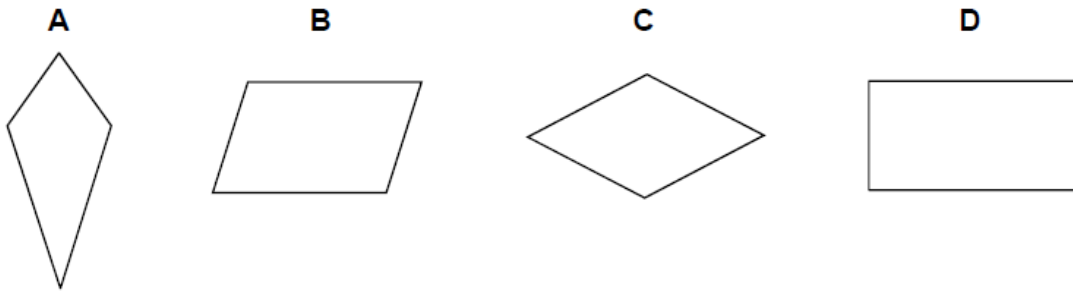6. On the grid, draw a parallelogram.

[1]

7. A company's logo

- is a pentagon
- has exactly one line of symmetry
- has sides with whole number lengths
- has a perimeter of 15 cm

Draw a sketch of a possible logo.

Label each side with its length.
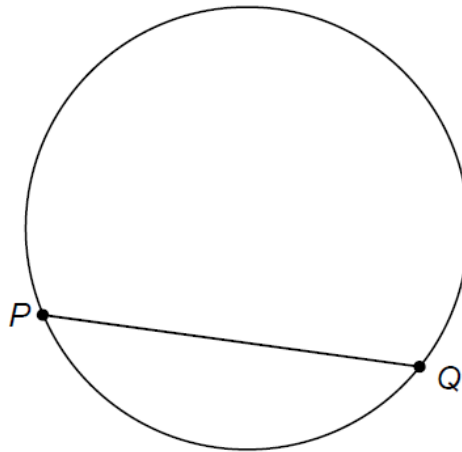
[2]

8. Which shape has two lines of symmetry and its diagonals intersecting at 90°?

A   B   C   D

Circle the correct letter.
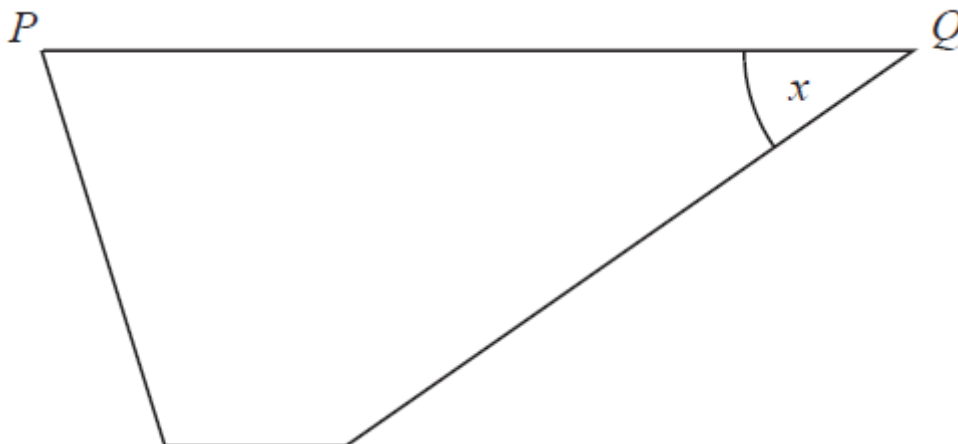
[1]

9. Circle the word that describes the straight line PQ.

[1]

chord   diameter   radius   tangent

10. Here is a trapezium.

This diagram is accurately drawn.

(a) Measure the length of the line PQ.

....cm [1]

(b) Measure the size of the angle marked x.

....° [1]

11. Here is a triangle ABC.
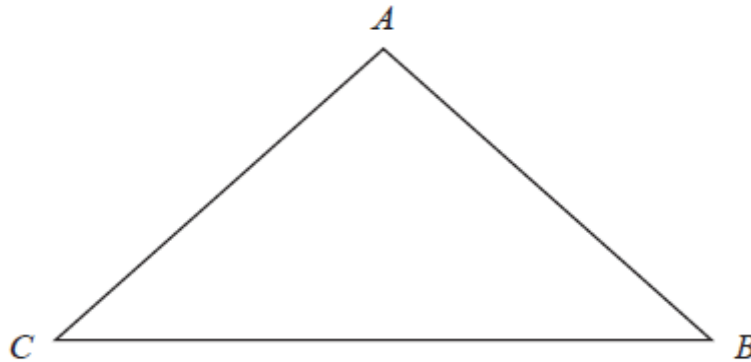
(a) Mark, with the letter *y*, the angle *CBA*.

[1]

Here is a cuboid.

Some of the vertices are labelled.

(b) Shade in the face *CDEG*.

[1]

(c) How many edges has a cuboid?

.... [1]

CREDITS AND NOTES

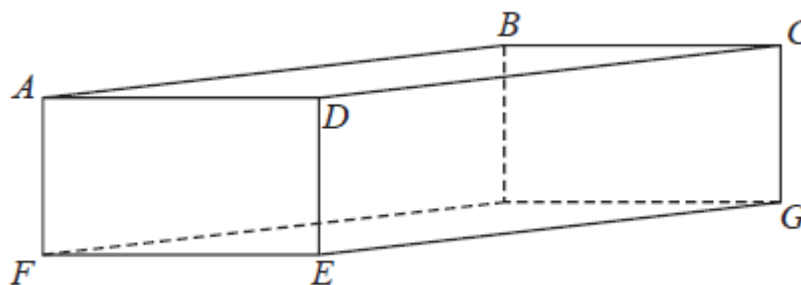| Question	Awarding Body
1	OCR
2	OCR
3	AQA
4	AQA
5	Pearson Edexcel
6	Pearson Edexcel
7	AQA
8	AQA
9	AQA
10	Pearson Edexcel
11	Pearson Edexcel

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 and Practice set 1

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