Bishops Online Tutoring

Education Consultancy

Edexcel GCSE Mathematics
2D & 3D SHAPES

Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

Instructions:

- Use a black ink pen to answer all questions
- Fill your name in the section below
- Answer the questions in the spaces provided
- Show your working out for all answers

Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

NO CALCULATOR ALLOWED

NAME:	

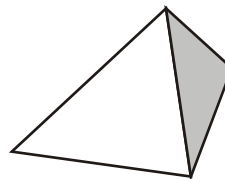**1.** Write down the mathematical name for each of these three different 3-D shapes.
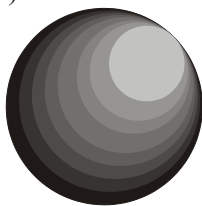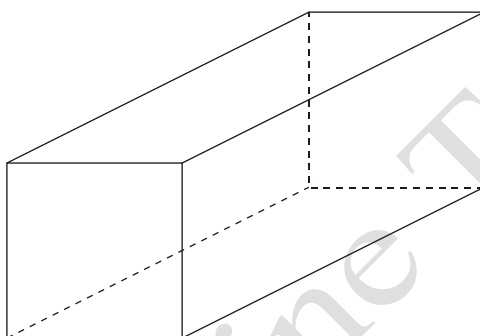
(i) (ii) (iii)

(i) .... (ii) .... (iii) ....

(3 marks)

2.

Here is a diagram of a cuboid.

Write down the number of

(i) faces ....

(ii) edges ....

(iii) vertices ....

(3 marks)

3. Write down the mathematical name of each of these 3-D shapes.
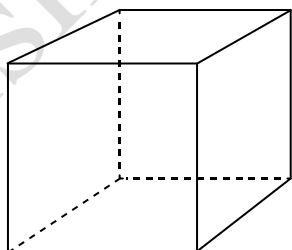
(i) (ii)

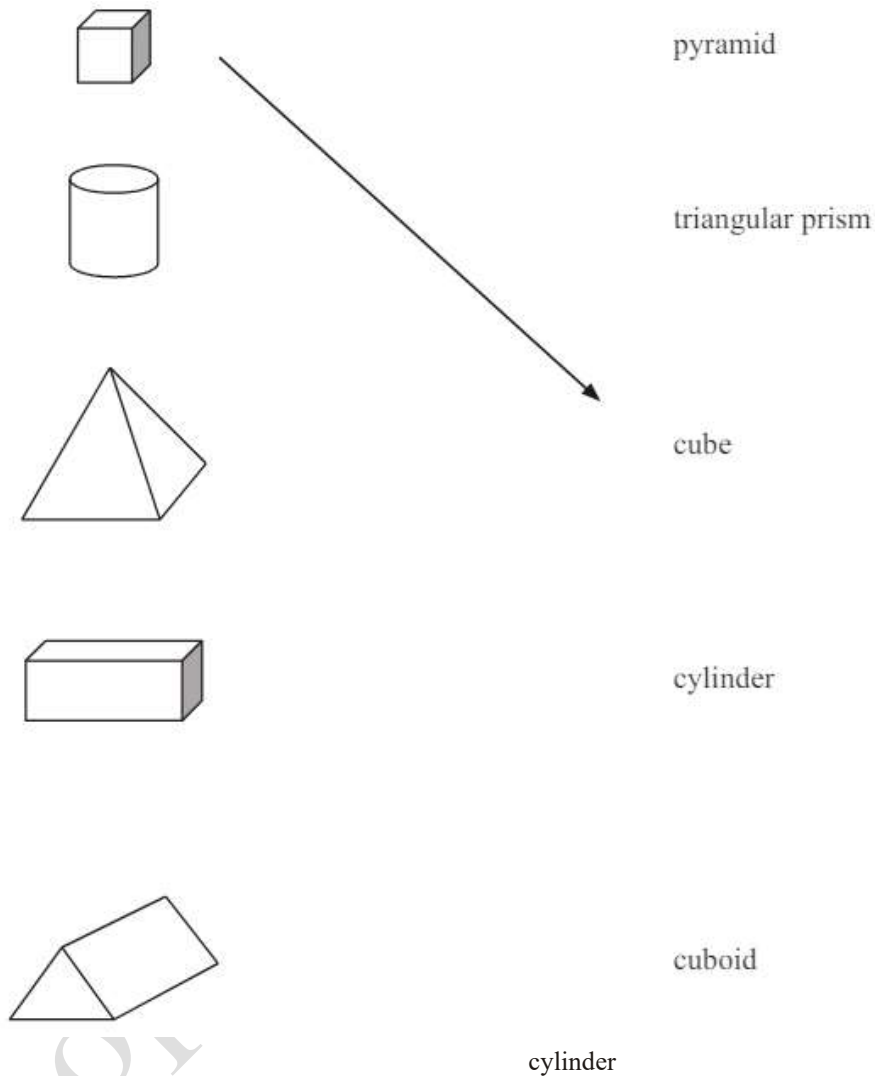(i) .... (ii) ....
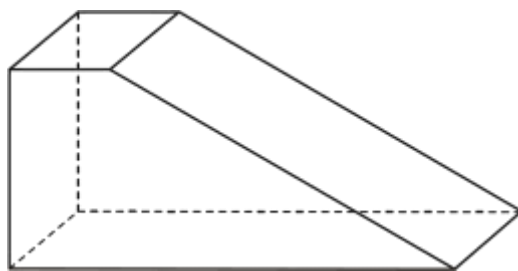
(2 marks)

4. The diagram shows some solid shapes and some mathematical names.
An arrow has been drawn from one solid shape to its mathematical name.

Draw an arrow from each of the other solid shapes to its mathematical name.
The cube has been done for you.

pyramid

triangular prism

cube

cylinder

cuboid

cylinder

(3 marks)

5. Here is a diagram of a 3-D prism.

Write down the number of

(i)   faces, ...

(ii) edges, ...

(iii) vertices.   ....

(3 marks)

6.   The diagram shows a solid triangular prism.
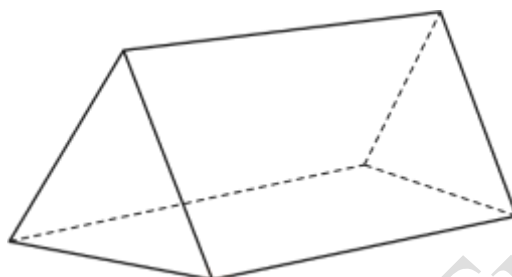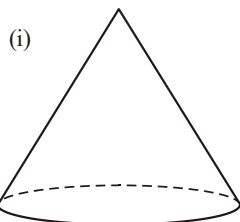
Diagram **NOT** accurately drawn

Write down

(i)   the number of faces   ....

(ii)   the number of edges   ....

(iii)   the number of vertices   ....

(iv)   On the grid below, draw a trapezium.
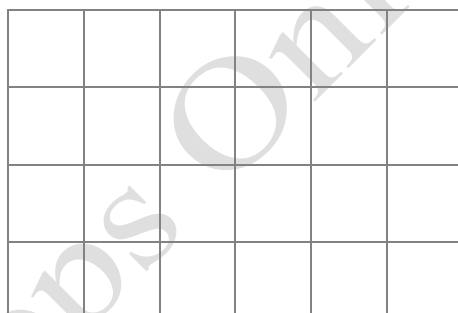
(4 marks)

7.   Write down the name of each of these two 3-D shapes.
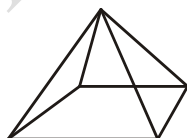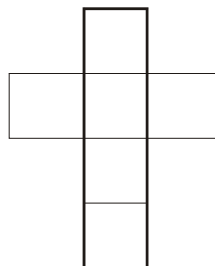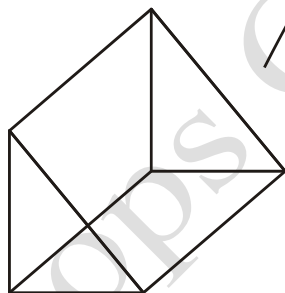
(i)   (ii)
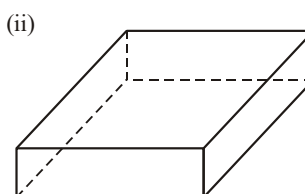
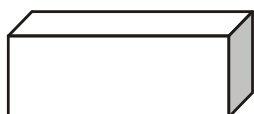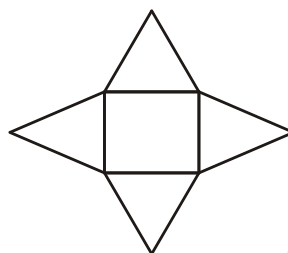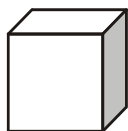(i) ....   (ii) ....
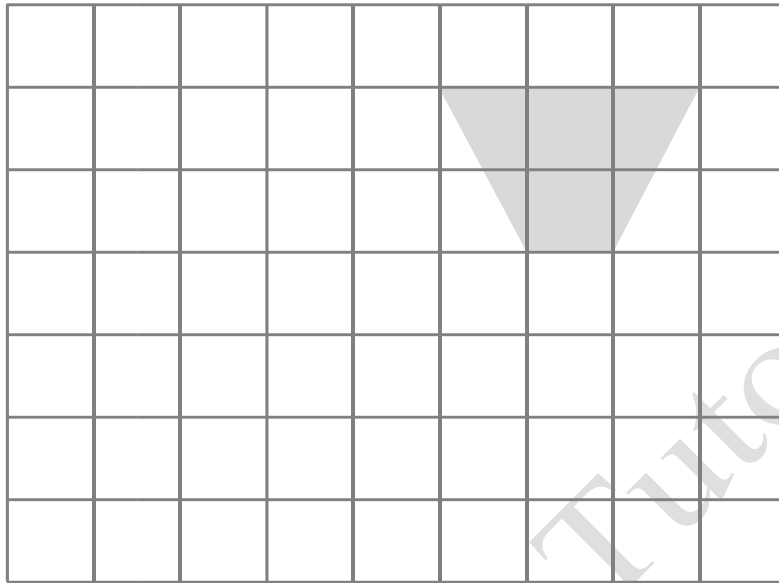
(2 marks)

8. The diagrams show some solid shapes and their nets.
An arrow has been drawn from one solid shape to its net.
Draw an arrow from each of the other solid shapes to its net.
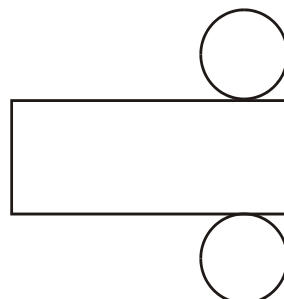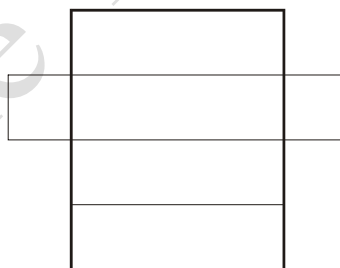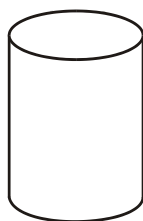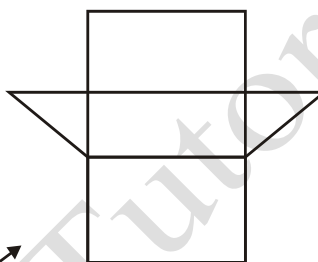
(3 marks)
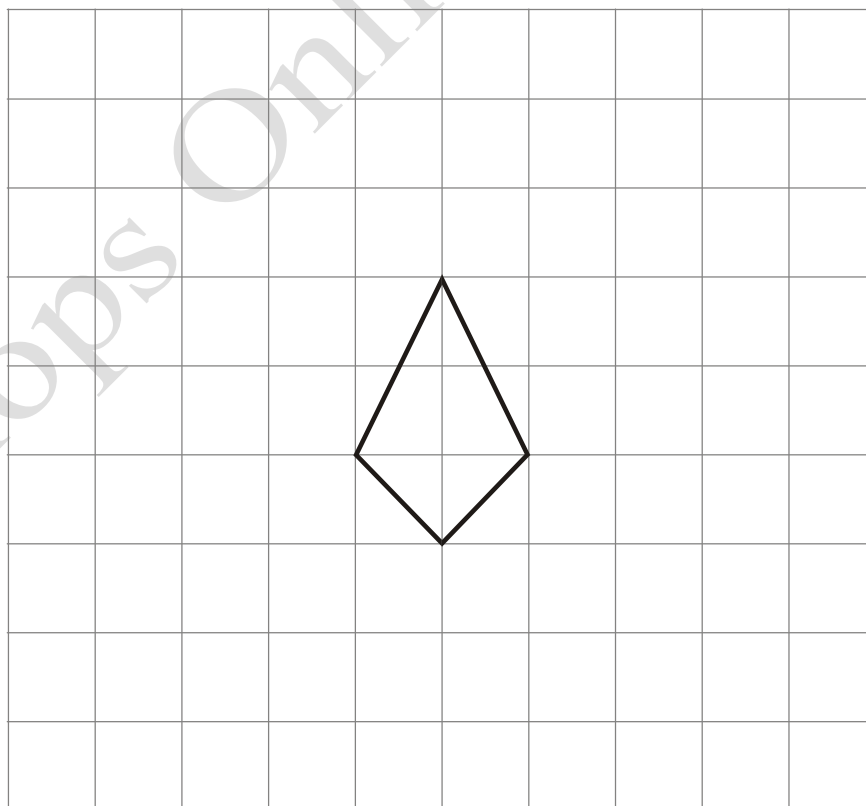
9. On the grid, show how this shape tessellates.

You should draw at least 6 shapes.

(3 marks)

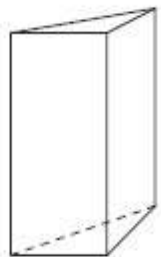**10.** On the grid, show how this kite will tessellate. You should draw at least 8 kites.

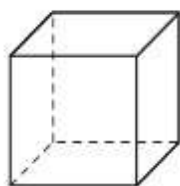**(3 marks)**

11. Here are 5 solid shapes.

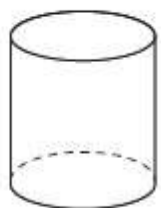(a) Match each solid shape to its name.
One has been done for you.

Cone

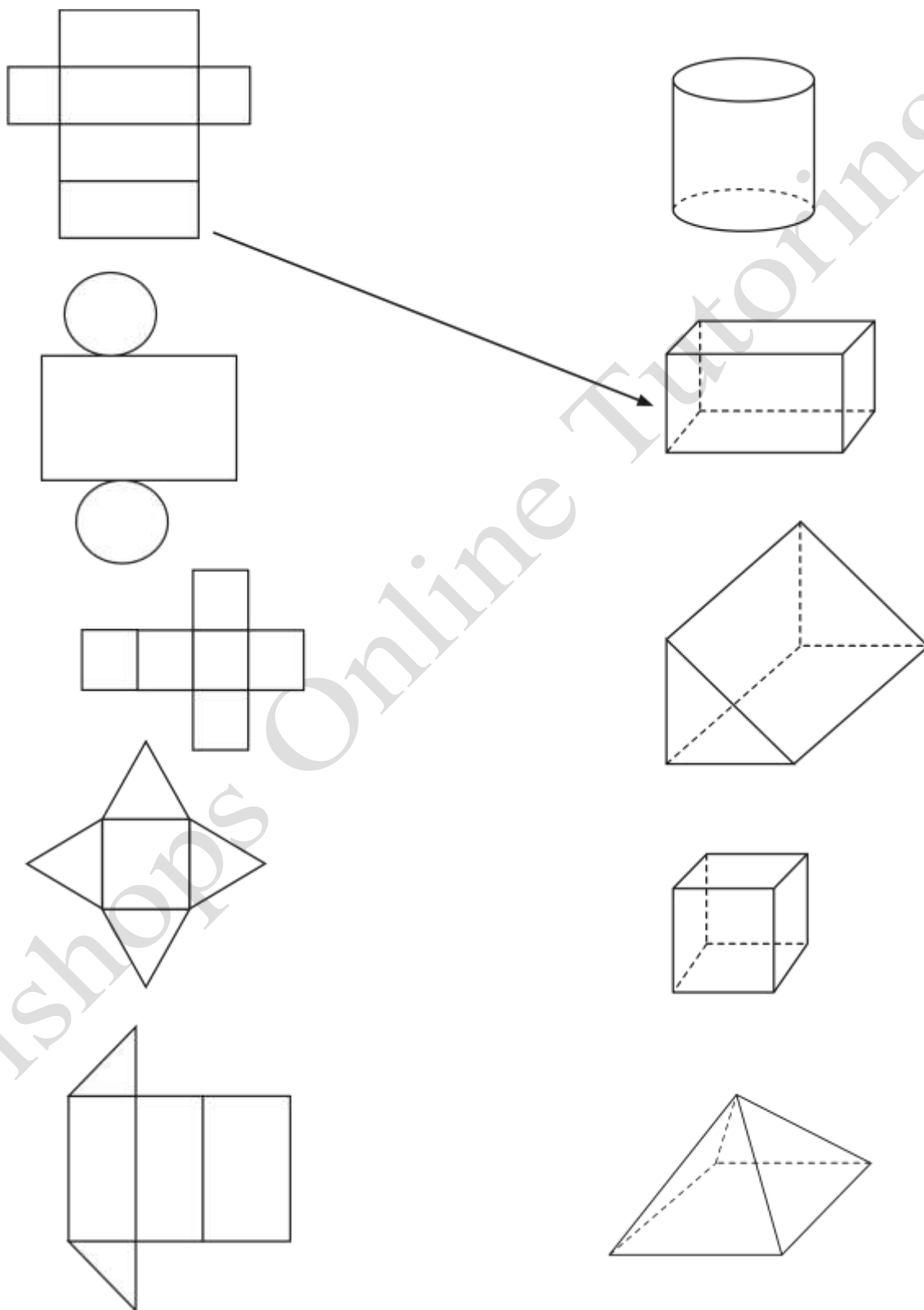Cube

Cuboid

Cylinder

Triangular prism

(3)

(b) How many faces does the cuboid have?

....

(1)

(4 marks)

12. The diagram shows some nets and some solid shapes.
An arrow has been drawn from one net to its solid shape.

Draw an arrow from each of the other nets to its solid shape.