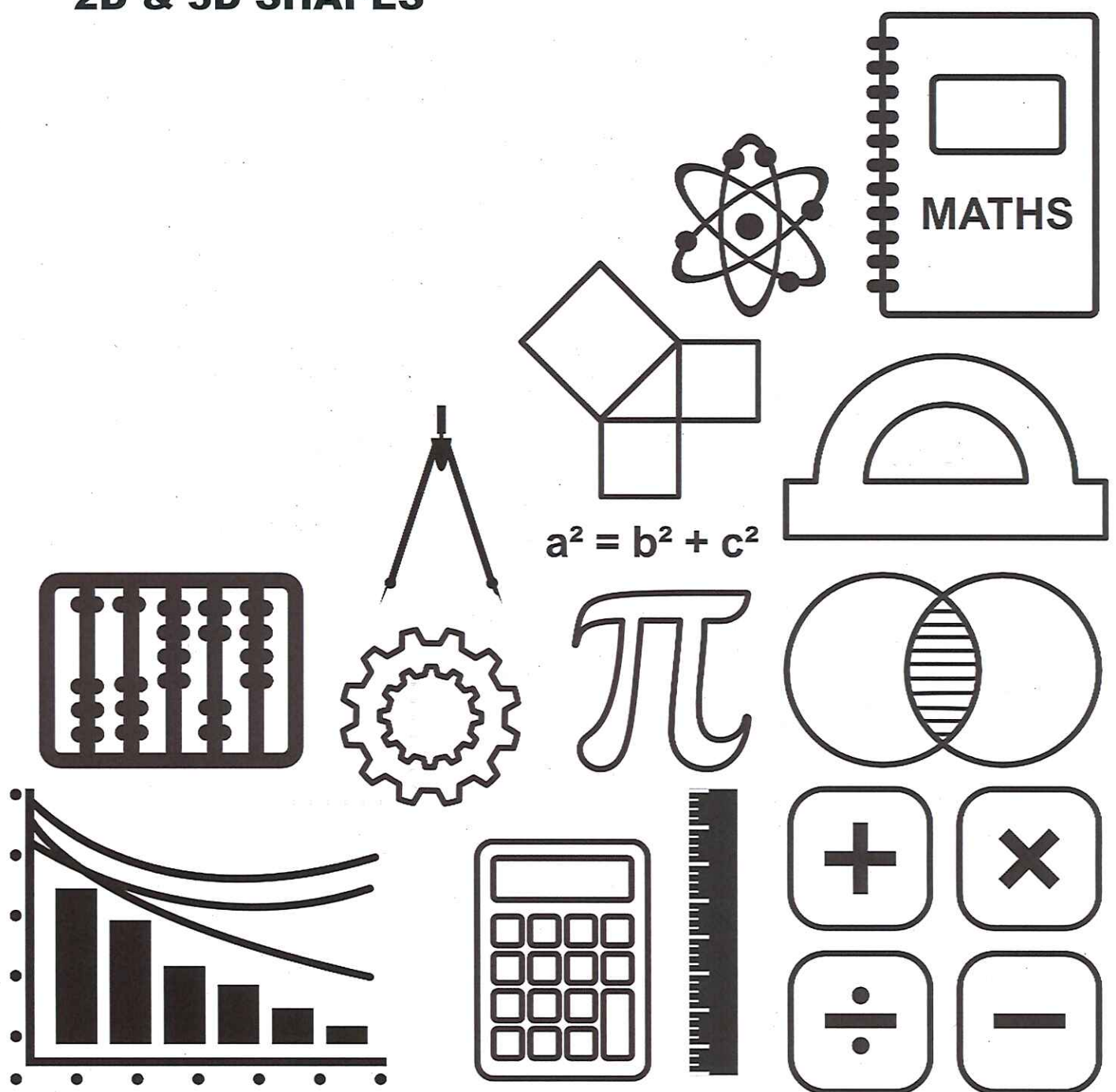


MATHSDIY

GCSE TOPIC BOOKLET 2D & 3D SHAPES

SOLUTIONS



1.

Draw a line connecting each of the following words to the correct shape.
One has been done for you.

[4]

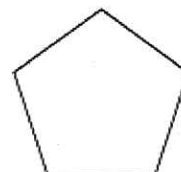
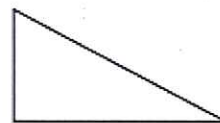
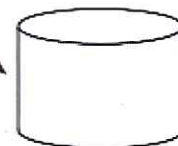
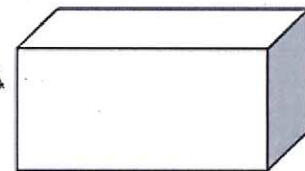
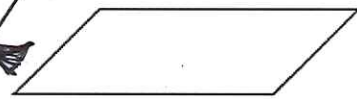
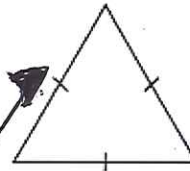
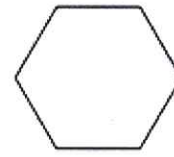
Cuboid

Cylinder

Trapezium

Pentagon

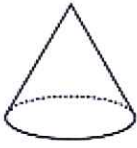
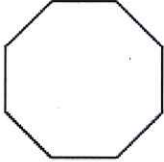
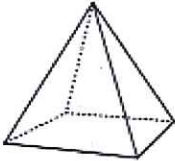
Equilateral triangle



2.

Write down the special name of each of the following figures.

[3]

	<u>cone</u>
	<u>octagon</u>
	<u>square based pyramid</u> <u>or</u> <u>rectangular based pyramid</u>

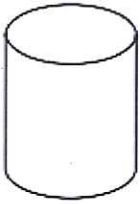
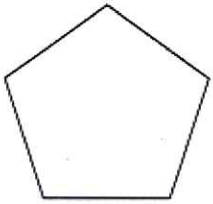
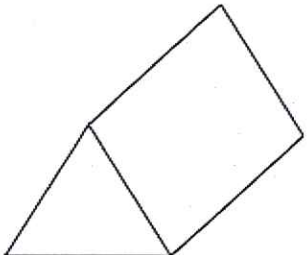
3. Tim has a cube, which he has labelled P, a square-based pyramid labelled Q, a triangular prism labelled R and a tetrahedron labelled S. Complete the following table. One has been done for you.

Properties of the shape	Label on shape
All faces are square.	P
2 triangular faces and 3 rectangular faces.	<u>R</u>
All its faces are triangles.	<u>S</u>
It has exactly 5 vertices.	<u>Q</u>

(3)

4. Write down the special name of each of the following figures.

[3]

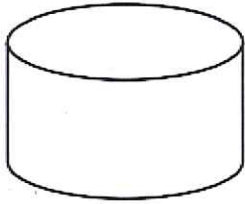
	<u>cylinder</u>
	<u>pentagon</u>
	<u>triangular prism</u>

5. A cone is labelled A. A cuboid is labelled B. A hexagon is labelled C and a tetrahedron is labelled D. Complete the following table, one has been done for you.

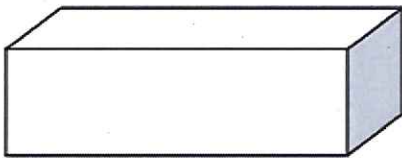
Properties of the shape	Label on shape
It has one circular face.	A
It is not a 3D shape.	<u>C</u>
All its faces are triangles.	<u>D</u>
All its faces are rectangles.	<u>B</u>

(3)

6. Write down the special name of the shape shown in each of the following diagrams. [2]



cylinder



cuboid

7. Think of a cuboid.

- a) How many faces has it got?
 b) How many vertices has it got?
 c) How many edges has it got?
 d) What is the shape of each of its faces?

6

8

12

rectangle

(4)

8. A pentagon is labelled A. A square based pyramid is labelled B. A cube is labelled C and a cylinder is labelled D. Complete the following table.

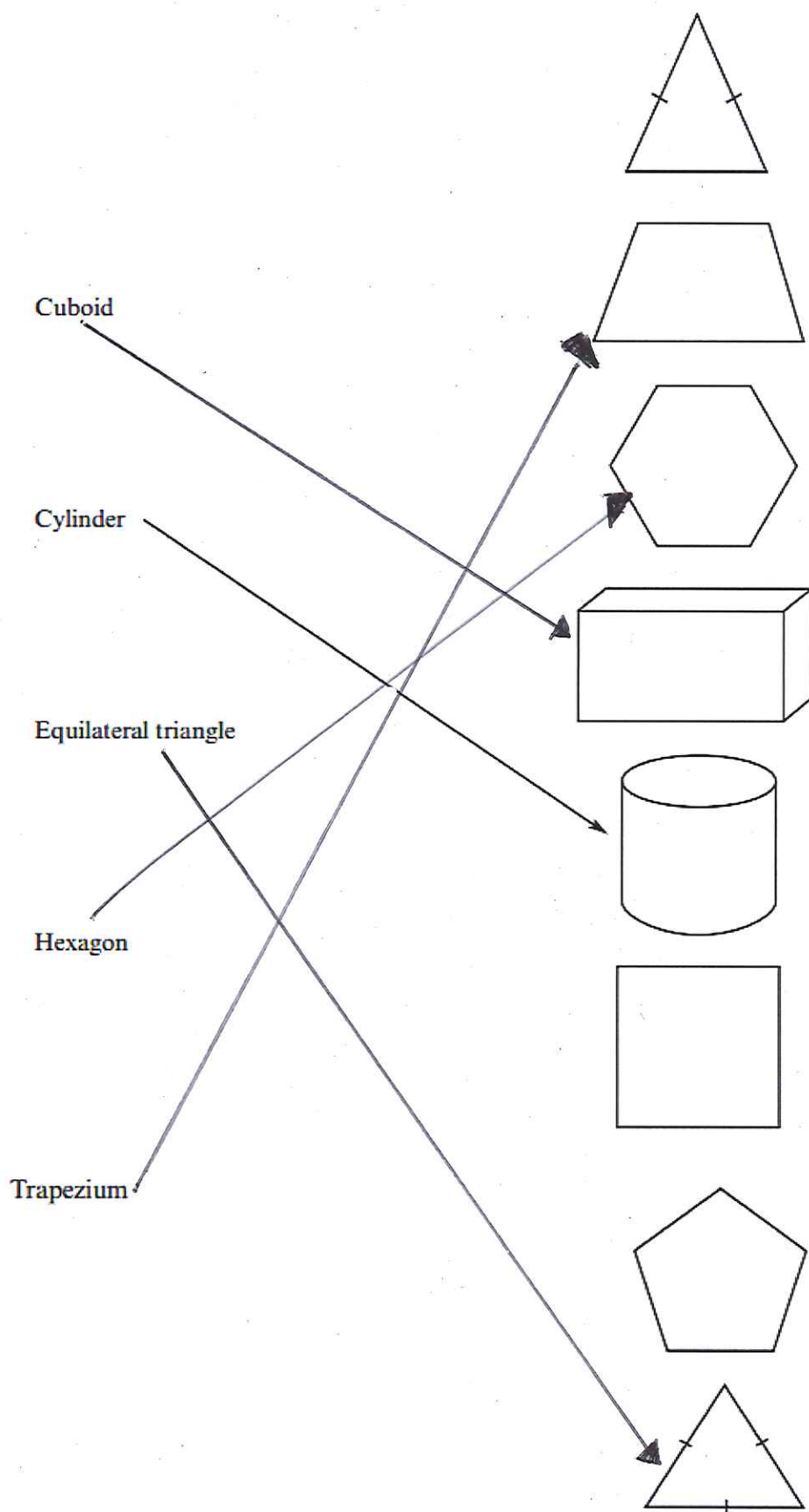
Properties of the shape	Label on shape
5 faces, 4 of which are triangular	<u>B</u>
It is not a 3D shape.	<u>A</u>
It has two circular faces.	<u>D</u>
All its faces are squares.	<u>C</u>

(4)

9.

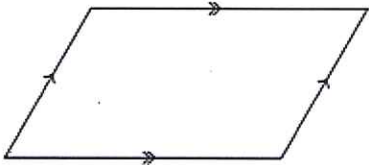
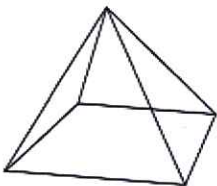
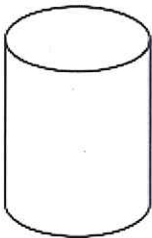
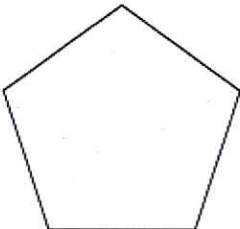
Draw a line connecting **each** of the following words to the correct shape. One has been done for you.

[4]



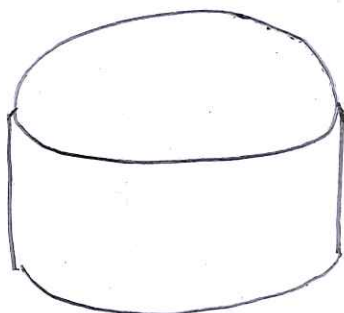
10. Write down the names of each of the following figures.

[4]

	<u>Parallelogram</u>
	<u>Square based pyramid</u> or <u>Rectangular based pyramid</u>
	<u>Cylinder</u>
	<u>Pentagon</u>

11. In the space below, draw a sketch of a cylinder.

[1]

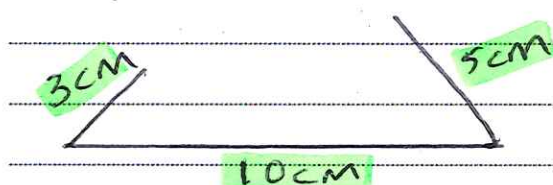


12. (a) Complete the following table by placing a tick (✓) in any box where the given statement is true.

Statement	Square	Parallelogram	Trapezium
The diagonals are equal in length	✓		
Opposite angles are equal	✓	✓	
Only one pair of opposite sides are parallel			✓
The diagonals are lines of symmetry	✓		

[3]

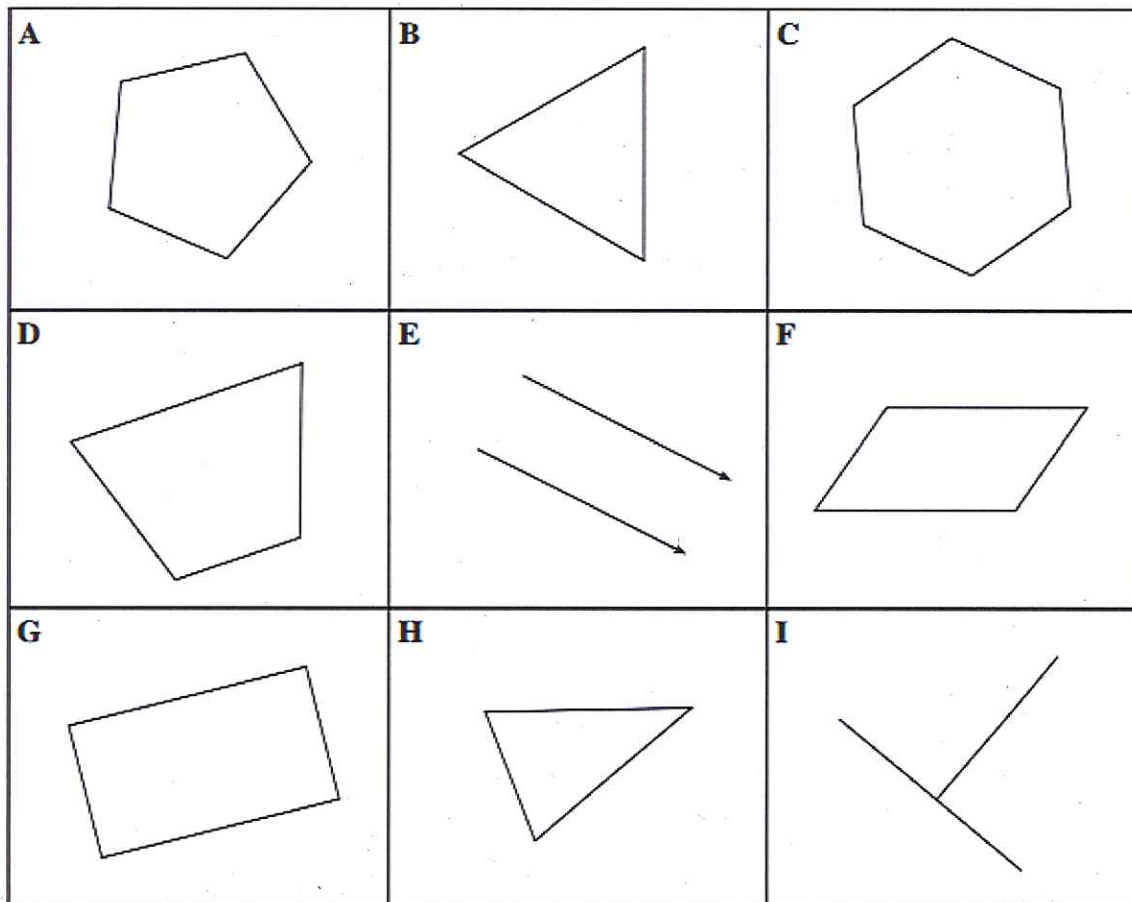
- (b) Explain why three lines of lengths 3 cm, 5 cm and 10 cm cannot be used to form a triangle.



The 3cm and 5cm will be too short to meet and form the third angle.

[1]

13.



Complete the following table.

Diagram	Letter
two perpendicular lines	I
an equilateral triangle	<u>B</u>
a parallelogram	<u>F</u>
a hexagon	<u>C</u>
a rectangle	<u>G</u>

[4]