

KS3 – Shapes

Section A – Properties of 2D Shapes

Q1 (5 marks)

Name the 2D shape described.

- a) A polygon with 3 sides.
- b) A quadrilateral with 4 equal sides and 4 right angles.
- c) A quadrilateral with exactly one pair of parallel sides.
- d) A polygon with 6 sides.
- e) A polygon with 8 sides.

Q2 (5 marks)

State the requested property.

- a) How many sides does a pentagon have?
- b) How many vertices does a heptagon have?
- c) How many pairs of parallel sides does a rectangle have?
- d) How many lines of symmetry does a square have?
- e) How many lines of symmetry does a regular pentagon have?

Q3 (4 marks)

Name each triangle from its description.

- a) Three equal sides.
- b) Exactly two equal sides.
- c) No equal sides.
- d) One angle is 90° .

Q4 (4 marks)

Name each quadrilateral from its description.

- a) Four equal sides, but its angles do not have to be right angles.
- b) Two pairs of parallel sides; opposite sides are equal.
- c) Four right angles; opposite sides are equal.
- d) Two pairs of adjacent equal sides.

Q5 (4 marks)

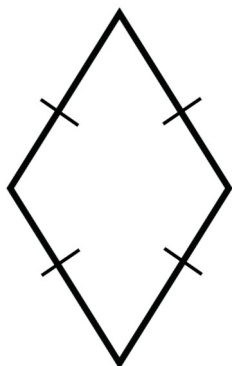
Decide whether each statement is true or false.

- a) Every square is a rectangle.
- b) Every rectangle is a square.
- c) Every equilateral triangle is also isosceles because it has at least two equal sides.
- d) A regular polygon has all sides and all angles equal.

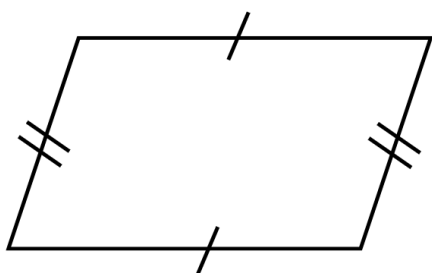
Q6 (3 marks)

Use the labelled diagrams to name each shape and give one property that proves your answer.

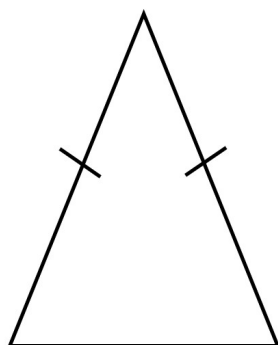
a)



b)



c)



Challenge

Q7 (4 marks)

Answer these reasoning questions.

- a) A quadrilateral has four equal sides and four right angles. Name it.

- b) A quadrilateral has four equal sides but no right angles. What is the most specific common name for it?

- c) A triangle has angles 60° , 60° and 60° . What type of triangle is it?

- d) A regular polygon has 10 sides. What is it called?

Section B – Properties of 3D Shapes

Q8 (4 marks)

Complete each statement.

- a) A flat surface of a 3D shape is called a _____.
- b) A line where two faces meet is called an _____.
- c) A point where edges meet is called a _____.
- d) What is the plural of vertex?

Q9 (5 marks)

Name the 3D shape described.

- a) It has 6 square faces.
- b) It has 6 rectangular faces and opposite faces are equal.
- c) It has 2 circular faces and 1 curved surface.
- d) It has 1 circular face, 1 curved surface and 1 vertex.
- e) It has no flat faces, edges or vertices.

Q10 (4 marks)

State the number of faces, edges and vertices.

- a) Cube
- b) Cuboid

c) Triangular prism

d) Square-based pyramid

Q11 (4 marks)

Answer these questions about prisms and pyramids.

a) What shape are the two matching end faces of a triangular prism?

b) How many rectangular side faces does a triangular prism have?

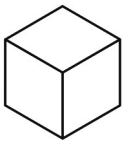
c) What shape is the base of a square-based pyramid?

d) How many triangular side faces does a square-based pyramid have?

Q12 (4 marks)

Use the labelled diagrams to identify each 3D shape.

a)



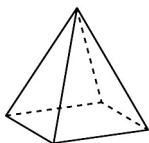
b)



c)



d)



Challenge

Q13 (4 marks)

Answer these reasoning questions.

- a) A 3D shape has 5 faces, 9 edges and 6 vertices. Name it.

- b) A 3D shape has 5 faces, 8 edges and 5 vertices. Name it.

- c) Which common 3D shape has exactly one vertex?

- d) Which common 3D shape has two circular faces?

Section C – Nets

Q14 (4 marks)

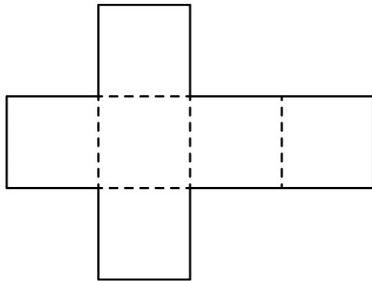
Answer these questions about nets.

- a) What is a net of a 3D shape?
- b) How many squares are needed to make a net of a cube?
- c) What 2D shapes make up a net of a triangular prism?
- d) What 2D shapes make up a net of a square-based pyramid?

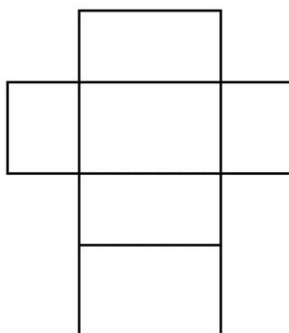
Q15 (4 marks)

Identify the 3D shape made by each net.

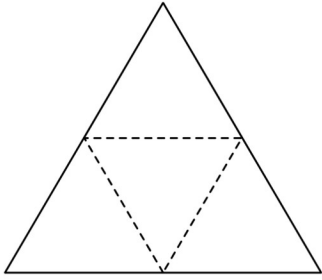
a)



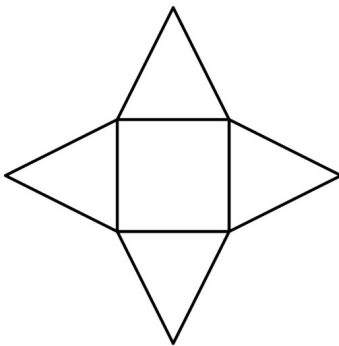
b)



c)



d)



Q16 (4 marks)

State whether each collection of faces could make the named solid.

a) Six equal squares — cube.

b) Two congruent triangles and three rectangles — triangular prism.

c) One square and three triangles — square-based pyramid.

d) Two circles and one rectangle — cylinder.

Q17 (3 marks)

A student is making nets. Answer each question.

a) They draw 6 squares for a cube but arrange all 6 in one straight row. Will this fold into a cube?

b) They draw 2 congruent triangles and 3 rectangles. Which common solid could this form?

c) They draw 1 square and 4 triangles. Which common solid could this form?

Challenge

Q18 (4 marks)

A net is made from 2 congruent pentagons and 5 rectangles.

a) Name the 3D shape it forms.

b) How many faces will the 3D shape have?

Total: ____ / 73

Percentage: ____%