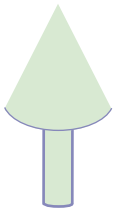


Q1. Which two solid shapes have been used in making the following origami tree?

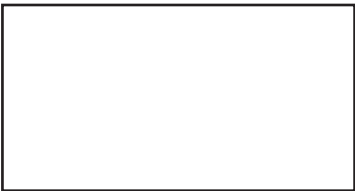



Answer: _____

Q2. Match the following objects with their corresponding 3-D shapes:

Objects	3-D shape
A tissue paper box	Cylinder
Tip of a sharpened pencil	Sphere
A log of wood	Cuboid
A tennis ball	Cone

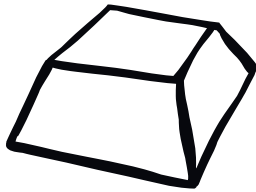
Q3. Classify the following shapes as two-dimensional or three-dimensional. In the space provided, write 2-D for two-dimensional and 3-D for three-dimensional.

Shape	2-dimensional or 3-dimensional
a. 	_____
b. 	_____

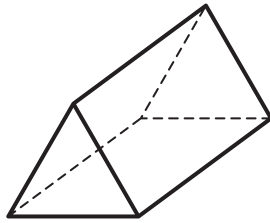
c.



d.



e.



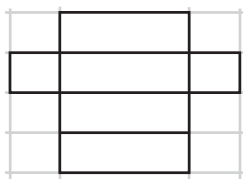
Q4. Rajan has cutouts of three identical rectangles and two triangles. The breadth of the rectangles and each side of the triangle is equal. Which of the following 3-D shapes can Rajan make using all the cutouts?

- a. Triangular prism
- b. Square pyramid
- c. Triangular pyramid

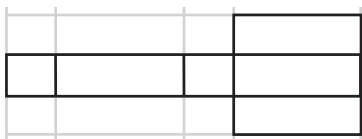
Answer: _____

Q5. Which of the following cannot be folded to make a cuboid? Choose the correct answer.

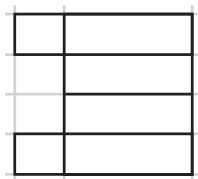
a.



b.

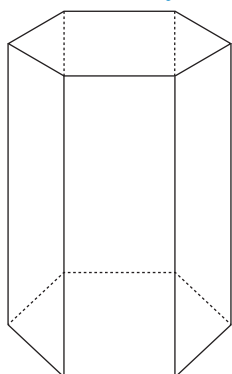


c.



Answer: _____

Q6. Find the number of faces, edges and vertices in the following 3-D figure and verify Euler's formula:



Number of faces: _____;

Number of edges: _____;

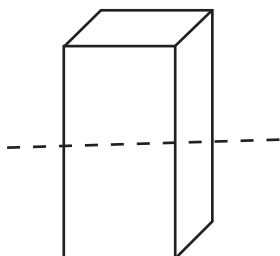
Number of vertices: _____

Verifying Euler's Formula: _____

Q7. Fill in the blanks with the correct number of edges, faces and vertices for each of the following 3-D shapes:

3-D shape	Number of Faces	Number of Vertices	Number of Edges
a. Cube	_____	_____	_____
b. Pentagonal prism	_____	_____	_____
c. Triangular pyramid	_____	_____	_____

Q8. A brick $4\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ is cut horizontally from the middle, along the dotted line shown in the figure below.



Find the shape of the two identical solids that will be formed after cutting, and draw their net.

Shape of the two solids : _____

Net of the resultant solids : _____

Q9. Rajat has to make 10 triangular prisms for a school project. He has to colour the rectangles with blue colour and the remaining part yellow. Find the number of faces he has to paint in each colour and fill in the blanks with the correct number:

- a. Rajat has to put blue colour on _____ faces.
- b. The remaining _____ faces have to be painted yellow.
- c. In all Rajat has to paint _____ faces.

Q10. Fill in the blanks:

- a. A microwave oven is in the shape of a _____.
- b. A square pyramid has _____ edges.
- c. A triangular prism has _____ faces.
- d. A _____ has no edges or vertices.

Answers

1. A cylinder and a cone

2.

Objects	3-D shape
A tissue paper box	Cuboid
Tip of a sharpened pencil	Cone
A log of wood	Cylinder
A tennis ball	Sphere

3. a. 3-D, b. 2-D, c. 2-D, d. 3-D, e. 3-D

4. (a)

5. (c)

6. Number of faces: 8;

Number of edges: 18;

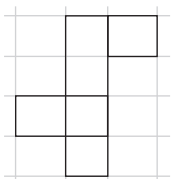
Number of vertices: 12

$$V + F - E = 2, 12 + 8 - 18 = 2$$

7.

	3-D shape	Number of Faces	Number of Vertices	Number of Edges
a.	Cube	6	8	12
b.	Pentagonal prism	7	10	15
c.	Triangular pyramid	4	4	6

8. Cube;



9. a. 30; b. 20; c. 50

10. a. cuboid; b. 8; c. 5; d. sphere