Vertices, Edges and Faces

A. Choose the correct answer:

1. How many faces does a cube have?

  a) 4   b) 6

  c) 8   d) 12

2. A cone has

  a) 1 face, 1 edge, 1 vertex   b) 2 faces, 1 edge, 1 vertex

  c) 2 faces, 2 edges, 0 vertex   d) 1 face, 2 edges, 1 vertex

3. How many vertices does a cuboid have?

  a) 6   b) 8

  c) 12   d) 10

4. The number of edges in a triangular prism is

  a) 9   b) 10

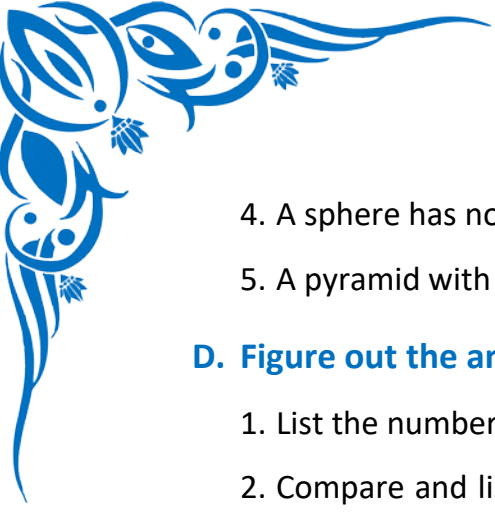 c) 11   d) 12

5. A sphere has

  a) 1 face, 1 edge, 0 vertex   b) 0 face, 0 edge, 0 vertex

  c) 1 curved face, 0 edge, 0 vertex   d) 1 face, 1 edge, 1 vertex

B. Write the Missing Terms to Complete the Sentences:

1. A cuboid has _____ faces, _____ edges, and _____ vertices.

2. A pyramid with a square base has _____ faces.

3. A cylinder has _____ curved face and _____ circular faces.

4. A cone has _____ vertex and _____ curved surface.

5. The number of edges in a cube is _____.

C. Mark each sentence with a True (✔) or False (✗):

1. A cube and a cuboid have the same number of edges.   _____

2. A cone has more edges than a sphere.   _____

3. A cylinder has 3 faces and 2 edges.   _____

4. A sphere has no vertices, edges, or flat faces. _____

5. A pyramid with a triangle base has 4 faces. _____

D. Figure out the answers to these questions:

1. List the number of faces, edges, and vertices in a triangular pyramid.

2. Compare and list the differences in faces, edges, and vertices between a cube and a cuboid.

3. Create a table showing faces, edges, and vertices of cube, cone, cylinder, and sphere.

4. Identify a 3D object in your home and describe it using the terms face, edge, and vertex.

5. Draw a cuboid and label all faces, edges, and vertices clearly.

E. Challenge yourself with these questions:

1. Count the number of faces, edges, and vertices of a pentagonal prism.

2. Draw and count all edges, vertices, and faces of a square pyramid.

3. What 3D shape has 6 faces, all rectangular, and 8 vertices? Describe it.

4. A cone has how many faces and edges? Explain using a sketch.

5. Create a real-life example of each: a shape with no edges, a shape with exactly one vertex, and a shape with 12 edges.

F. Draw the following solids and write the number of vertices, edges and faces:

1. a cube

2. a cuboid

3. a triangular prism

4. a triangular pyramid

5. a square pyramid

Find the value of Vertices + Faces – Edges in each case. Is it same?