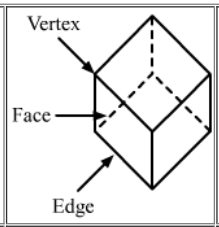
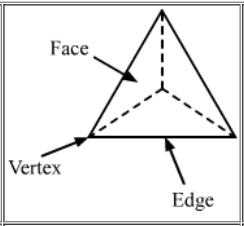
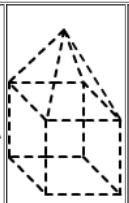
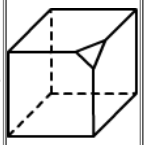
Question:1

Complete the following table and verify Euler's formula in each case.

				
Faces (F)	6	4	9	7
Edges (E)	12	6	16	15
Vertex (V)	8	4	9	10

Solution:

	I	II	III	IV
Faces (F)	6	4	9	7
Edges (E)	12	6	16	15
Vertices (V)	8	4	9	10
Euler's formula (F – E + V)	6 – 12 + 8 = 2	4 – 6 + 4 = 2	9 – 16 + 9 = 2	7 – 15 + 10 = 2

Hence Euler's formula is verified for these figures.

Question:2

Give three examples from our daily life which are in the form of (i) a cone (ii) a sphere (iii) a cuboid (iv) a cylinder (v) a pyramid.

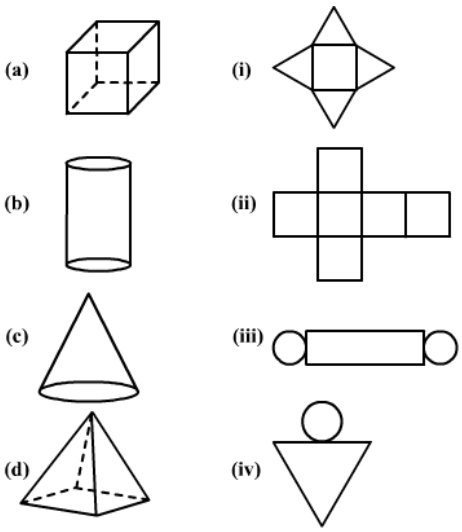
Solution:

Examples of

(i) Cone: Ice-cream cone, clown cap, rocket
(ii) Sphere: Football, a round apple, an orange
(iii) Cuboid: book, brick, duster
(iv) Cylinder: circular pipe, glass, circular pole
(v) Christmas decorations, cheese and patio umbrellas.

Question:3

Match the following nets with appropriate solids:



Solution:

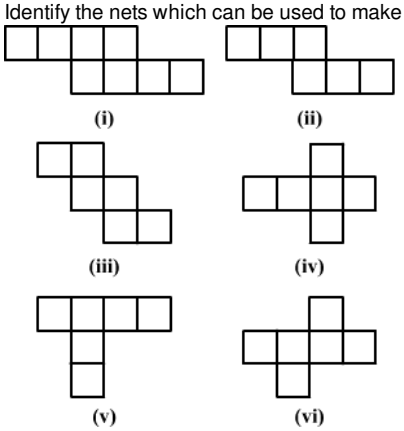
Here

(a) → (ii)
(b) → (iii)
(c) → (iv)

(d) → (i)

Question:4

Identify the nets which can be used to make cubes (cut-out the nets and try it):

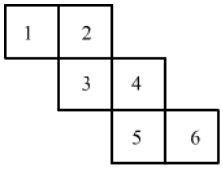


Solution:

Only (ii), (iv) and (vi) form a cube.

Question:5

Can the following be a net for a die? Explain your answer.

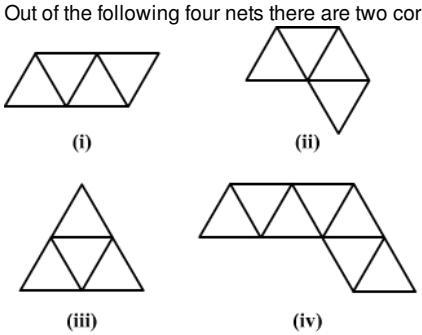


Solution:

Since, in a die, the sum of the number of opposite faces of a die is 7. In the given figure, it is not possible to get the sum as 7. Hence the given net is not suitable for a die.

Question:6

Out of the following four nets there are two correct nets to make a tetrahedron. Identify them.

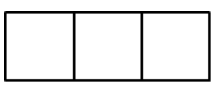


Solution:

For making a tetrahedron, only (i) and (iii) are suitable nets.

Question:7

Here is an incomplete net for making a cube. Complete it in atleast two different ways.



Solution:

The complete nets for making a cube are

Images