EXERCISE - I UNSOLVED PROBLEMS

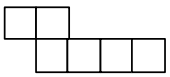
Q.1 From your surroundings, give two examples each of the following shapes :

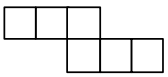
(i) Cube (ii) Cuboid
(iii) Cone (iv) Cylinder
(v) Sphere

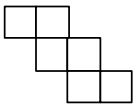
Q.2 Which of the following are 2-D figures and which are 3-D figure

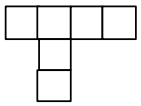
(i) rectangle (ii) cylinder
(iii) circle (iv) sphere
(v) octagon (vi) cone

Q.3 Identify the nets which can be used to make cubes :

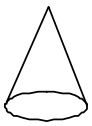

(i)

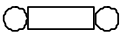

(ii)

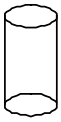

(iii)

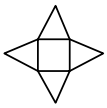

(iv)

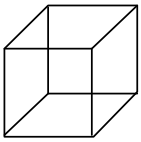
Q.4 Match the nets with appropriate solids :

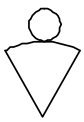
(i) 

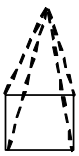
(a) 

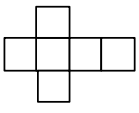
(ii) 

(b) 

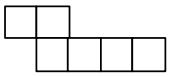
(iii) 

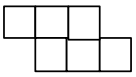
(c) 

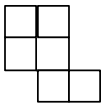
(iv) 

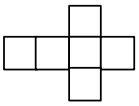
(d) 

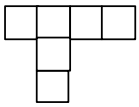
Q.5 Find the nets which can be used to make cubes:

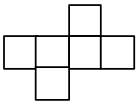

(i)


(ii)

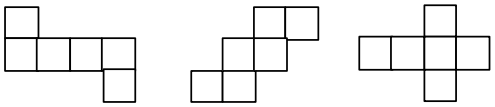

(iii)


(iv)


(v)


(vi)

Q.6 We know that a die is a cube with dots or a number on each face. Opposite faces of a die are always total to seven. Now fill in the following nets of a cube with appropriate numbers, so as to form a die on folding it.



Q.7 Fill in the blanks :

(i) A line where two faces of a solid meet is called its ……

(ii) A regular triangular pyramid is also called…..

(iii) A square pyramid has……triangular faces.

(iv) A cube has……vertices and……..surfaces.

(v) A cylinder has one…..face and…….plane faces.

(vi) A sphere is a solid which has only……surface.

(vii)A tetrahedron is also called a …… pyramid.

(viii)A triangular prism has…….rectangular surfaces and……triangular surfaces.

(ix) A pyramid is said to be regular if all its surfaces are…….triangles.

(x) A cone has one…….surface and one ….. surface.

Q.8 State true (T) or false (F) for the following statements :

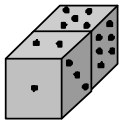
(i) In a pyramid, all the faces except base are triangular (Base can also be a Δ).

(ii) A tetrahedron is a pyramid in which all triangular faces are equilateral triangles.

(iii) A square pyramid has 5 faces.

(iv) A triangular pyramid has four vertices.

Q.9 Two dice are placed side by side as shown :



What total would be on the face opposite to
(i) 5 + 2 (ii) 6 + 3

Q.10 Using a square graph paper, draw the cubes whose edges are :
(i) 4 cm (ii) 3.5 cm
(iii) 3 cm

Q.11 Using a square graph paper, draw the cuboid whose dimensions are :
(i) 3 cm × 4 cm × 3 cm
(ii) 4 cm × 3 cm × 2 cm

Q.12 Using an isometric graph paper, draw the cubes whose edges are :
(i) 5 cm (ii) 4 cm

Q.13 Using an isometric dot paper, draw the cuboid whose dimensions are :
(i) 3 cm × 3 cm × 2 cm
(ii) 7 cm × 4 cm × 6 cm

Q.14 Fill in the blanks
(i) A cube has…….vertices.
(ii) Great pyramid in Giza (Egypt) is an example of……pyramid.
(iii) A birthday cap is an example of ……
(iv) A cricket ball is an example of …..
(v) A Almirah is an example of …….
(vi) A dice is an example of ……
(vii) A …… is a sort of Skelton-outline in 2-D, which, when folded, results in a 3-D shape.
(viii) If three cubes of dimensions 3 cm × 3 cm × 3 cm are joined, then the resultant solid is a ……...
(ix) A square prism is also called …....
(x) A triangular pyramid has ……. triangular faces.
(xi) A sphere has ……. vertex.
(xii) A cone has …… curved edge.
(xiii) A triangular prism is also called …..
(xiv) A solid bounded by six rectangular faces is called ……
(xv) A solid occupies a fixed amount of …..

ANSWER KEY

1. (i) Sugar lump, dice
(ii) Match box, brick
(iii) Ice cream cone, Joke cap
(iv) Tin, Pipes (v) Ball, marble

2. (i), (iii) & (v) are 2D ;
(ii), (iv), (vi) are 3D

4. (i) → c, (ii) → a, (iii) → d, (iv) → b

5. (iv)

7. (i) Edge (ii) Tetrahedron
(iii) 4 (iv) 8, 6
(v) Curved, two (vi) Curved
(vii) Regular triangular
(viii) 3, 2 (ix) Equilateral
(x) Plane, curved

8. (i) F (ii) T (iii) T (iv) T

9. (i) 2 + 5 (ii) 1 + 4

14. (i) 8
(ii) Square
(iii) Cone
(iv) Sphere
(v) Cuboid
(vi) Cube or Cuboid
(vii) Net
(viii) Cuboid
(ix) Cube
(x) 2
(xi) no
(xii) 1
(xiii) Tetrahedron
(xiv) Cuboid
(xv) Space

Exercise - II OLYMPIAD PROBLEMS

Q.1 Circle is a:

(A) plane figure (B) solid figure

(C) both (D) none of these

Q.2 The other name of a tetrahedron is:

(A) triangular pyramid

(B) triangular prism

(C) square pyramid

(D) none of these

Q.3 A petagonal pyramid has:

(A) 3 vertices (B) 4 vertices

(C) 6 vertices (D) none of these

Q.4 A square prism has:

(A) 5 edges (B) 8 edges

(C) 12 edges (D) 15 edges

Q.5 A cone has:

(A) 1 face (B) 2 faces

(C) 3 faces (D) 5 faces

Q.6 A rectangular pyramid has:

(A) 2 faces (B) 4 faces

(C) 5 faces (D) 6 faces

Q.7 The name of the figure which has 6 vertices, 9 edges and 5 faces is:

(A) cuboid (B) cube

(C) cone (D) triangular prism

Q.8 Name the solid figure which has no vertex and no edge:

(A) cylinder (B) cone

(C) sphere (D) tetrahedron

Q.9 The net of a solid consists of three rectangles and two triangles. This may be the net of a:

(A) cuboid (B) pyramid

(C) triangular prism (D) none of these

Q.10 The net for a cylinder without top and bottom is a:

(A) rectangle (B) circle

(C) triangle (D) none of these

Q.11 The lines of symmetry in a square are:

(A) 2 (B) 1

(C) 4 (D) 3

Q.12 The lines of symmetry in a rectangle are:

(A) 2 (B) 1

(C) 4 (D) 3

Q.13 The lines of symmetry in an isosceles triangle are:

(A) 1 (B) 2

(C) 3 (D) 4

Q.14 An equilateral triangle has rotational symmetry of order:

(A) 2 (B) 1

(C) 4 (D) 3

Q.15 A square has rotational symmetry of order:

(A) 2 (B) 3

(C) 4 (D) 1

ANSWER KEY

1.	A	**2.**	A	**3.**	C	**4.**	C
5.	B	**6.**	C	**7.**	D	**8.**	C
9.	C	**10.**	A	**11.**	C	**12.**	A
13.	A	**14.**	D	**15.**	C		