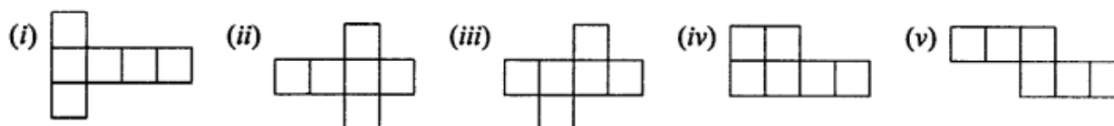


Board – ICSE

Class – 7

Topic – Recognition of Solids

1. Identify the nets which can be used to form cubes



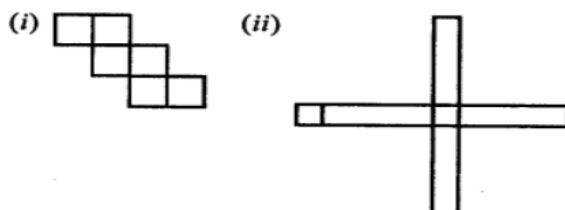
2. Using Euler's formula, find the values of a, b, c and d.

Faces	a	5	20	6
Vertices	6	b	12	d
Edges	12	9	c	12

3. Dice are cubes with dot or dots on each face. Opposite faces of a die always have a total of seven on them. Below are given two nets to make dice (cube), the numbers inserted in each square indicate the number of dots in it.



4. The following figures represent nets of some solids. Name the solids



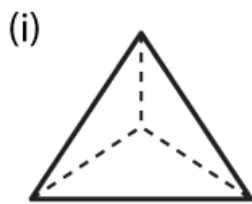
5. In the map of India, the distance between two cities is 13.8 cm.
Taking scale : 1 cm = 12 km, find the actual distance between these two cities.
6. Which of the solids has the maximum number of vertices
 - a) cuboid
 - b) pyramid
 - c) cylinder
 - d) cone
7. The curved face of a cylinder can be opened up as a
 - a) rectangle
 - b) triangle
 - c) circle
 - d) None of the above
8. The angle between two adjacent edges of a cube and cuboid is
 - a) 90
 - b) 45
 - c) 120
 - d) 60
9. A cube is a prism with square faces
 - a) 6
 - b) 8
 - c) 4
 - d) None of the above
10. A cuboid is a prism with rectangular faces
 - a) 6
 - b) 8
 - c) 4
 - d) None of the above
11. Which of the following is a polyhedron
 - a) Prism
 - b) cylinder
 - c) cone
 - d) None of the above
12. A.....has 5 faces, 6 corners and 9 edges
 - a) triangular prism
 - b) square pyramid
 - c) Both

13. Which one of the following is not a cylinder

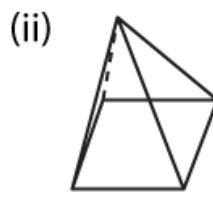
- a) a milk carton
- b) a mug
- c) a beaker

14. The shape of a drum is

15. Look at the solids, drawn below, and fill the given chart.



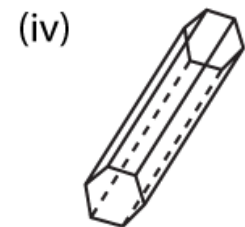
Triangular pyramid



Square pyramid



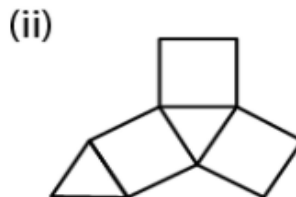
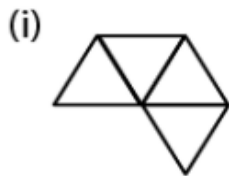
Hexahedron



Hexagonal

Polyhedron	Faces (F)	Vertices (V)	Edges (E)	$F - E + V$
(a) Triangular pyramid				
(b) Square pyramid				
(c) Hexahedron				
(d) Hexagonal prism				

16. The following figure represents nets of some solids. Name the solids.



17. What cross-sections do you get when you give a

- (i) vertical cut
- (ii) horizontal cut

to the following solids?

- (a) A brick
- (b) A round apple
- (c) A die
- (d) A circular pipe
- (e) An ice cream cone

18. The dimensions of a cuboid are 5 cm, 3 cm and 2 cm. Draw three different isometric sketches of this cuboid.

19. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Sketch an oblique or isometric sketch of this cuboid.

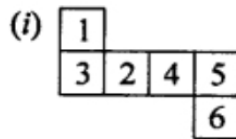
20. Draw at least three different nets for making cube.

Answers –

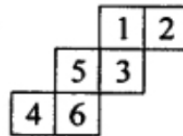
1. Nets for a cube are (ii) , (iii) and (v).

2. $a = 8, b = 6, c = 30, d = 8$

3.



(ii)



4. (i) The given nets of the solid is a cube.

(ii) The given nets of the solid is a cuboid

5. 165.5
6. Cuboid
7. Rectangle
8. 90
9. 6
10. 6
11. Prism
12. triangular prism
13. A milk carton
14. Cuboid

15.	Polyhedron	Faces (F)	Vertices (V)	Edges (E)	$F - E + V$
	(a) Triangular pyramid	4	4	6	2
	(b) Square pyramid	5	5	8	2
	(c) Hexahedron	8	6	12	2
	(d) Hexagonal prism	8	12	18	2

16. (i) Tetrahedron.

(ii) Triangular prism

17. Rectangle

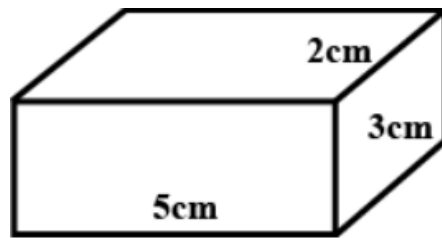
Circle

Rectangle

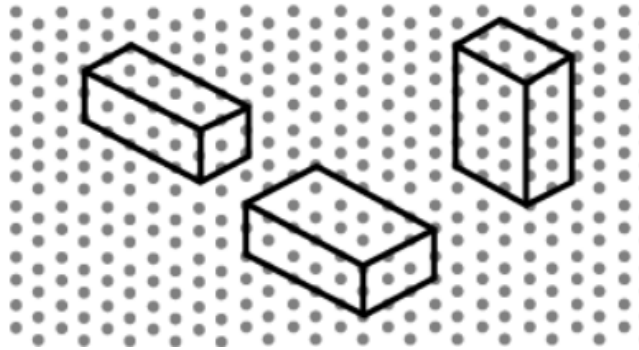
Vertically - rectangle, horizontally - circle

Vertically - triangle, horizontally - circle

18.

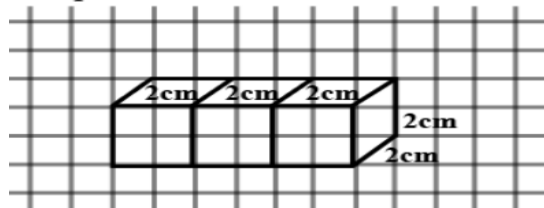


Three different isometric sketches are :

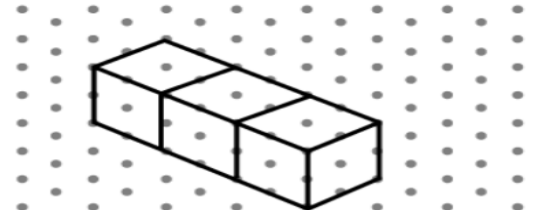


Oblique sketch:

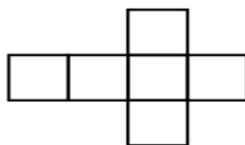
19.



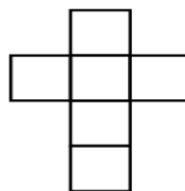
Isometric sketch:



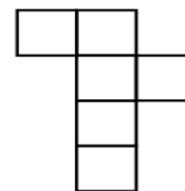
20.



(i)



(ii)



(iii)