

Class: VII

Subject: Mathematics

Topic: Ch-14 Symmetry, Ch-15 Visualising solid shapes

Read the instructions carefully and answer the following questions. Assertion and Reason Based Questions This type of reasoning questions consists of two statements; an assertion (statement of fact) and a reason (explanation for the assertion). You have to determine whether each statement is correct. If both the statements are correct, you have to determine whether the reason supports the assertion. There will be four answer choices for the possible outcomes and you have to select the correct one.

Q1.Assertion (A) : The side view of a cone looks like a triangle.

Reason (R) : A cone is a three dimensional geometric shape.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

Q2. Assertion (A) : A tetrahedron has 4 vertices.

Reason (R) : A triangular pyramid is a geometric solid with a triangular base, and all three lateral faces are also triangles.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

Q3.Assertion (A) : An angle has a line of symmetry.

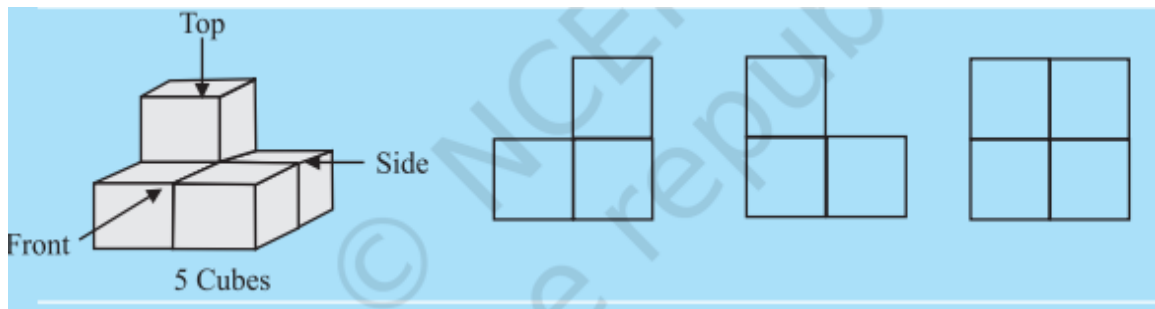
Reason (R) : An angle bisector of an angle divides it into 2 equal angles.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

Q4.Ankita arranges some cubes to form an object shown below. Without changing the given arrangement, what is the fewest number of cubes she needs to make it a cuboid?



Q5. Which option shows the view of the solid from the top, side and front?



Q6. Complete the following table.

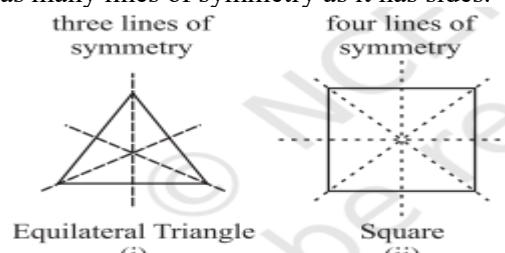
Faces (F)	6	4		
Edges (E)	12			
Vertices (V)	8	4		

Q7. Complete the table :

Shape	Centre of Rotation	Order of Rotation	Angle of Rotation
Square			
Rectangle			
Rhombus			
Equilateral Triangle			
Regular Hexagon			
Circle			
Semi-circle			

CASE STUDY

Q8. The regular polygons are symmetrical figures and hence their lines of symmetry are quite interesting, Each regular polygon has as many lines of symmetry as it has sides. We say, they



have multiple lines of symmetry.

Based on the above information answer the following questions

- i) How many lines of symmetry are there in the figure given below'.



- a) 2 b) 3 c) 4 d) none of these
- ii) What other name can you give to the line of symmetry of a circle?

- a) Radius b) Chord c) Diameter d) Sector
- iii) How many lines of symmetry letter S has ?
- a) 1 b) 2 c) 0 d) none of these