

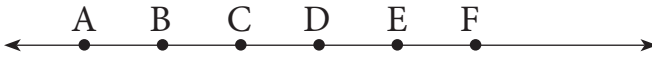
# FUNDAMENTAL GEOMETRICAL CONCEPTS

# 12

**Q1. State true or false:**

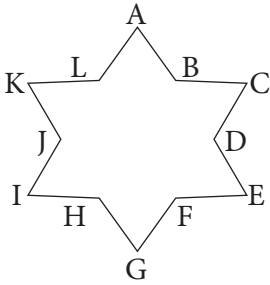
- a. A line has two end points.
- b. A ray does not have a definite length.
- c. A line segment is a part of a line.
- d. A line can be extended endlessly in both directions.

**Q2. On the basis of the figure given below, fill in the blanks:**



- a. Point \_\_\_\_ is the initial point of ray  $\overrightarrow{CF}$  and ray  $\overrightarrow{CA}$ .
- b.  $\overline{AB}$  and  $\overline{BC}$  have \_\_\_\_\_ common point(s).
- c. Line segment  $\overline{AE}$  is a part of the line segment \_\_\_\_.

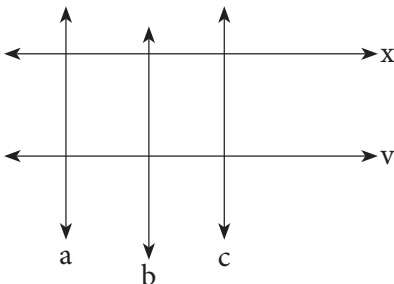
**Q3. How many pairs of parallel lines are there in the following figure? Name any two pairs.**



Number of pairs of Parallel lines: \_\_\_\_\_

Parallel lines: \_\_\_\_\_

**Q4. Observe the figure carefully and answer the questions given below:**



- a. A pair of parallel lines : \_\_\_\_\_
- b. Any two pairs of perpendicular lines : \_\_\_\_\_
- c. Any two pairs of intersecting lines : \_\_\_\_\_

**Q5. Find the maximum points of intersection with:**

Number of lines	Minimum points of intersection	Maximum points of intersection
Two	_____	_____
Three	_____	_____

**Q6. Fill in the blanks:**

- a. All sides of a \_\_\_\_\_ and \_\_\_\_\_ are equal.
- b. The \_\_\_\_\_ sides of a rectangle are equal.
- c. Each angle in a square and rectangle is \_\_\_\_\_.
- d. A triangle has \_\_\_\_\_ sides and \_\_\_\_\_ vertices.

**Q7. Draw a rhombus and its diagonals. Find how many triangles are there in the resulting figure.**

Answer: \_\_\_\_\_

**Q8. Identify the shape of the following objects and draw their net:**

Object	3-D shape	Net
A cellphone	_____	_____
A can of paint	_____	_____

**Q9. Name the polygon having the following number of sides:**

Number of sides	Name of the polygon
3	_____
8	_____
5	_____
7	_____

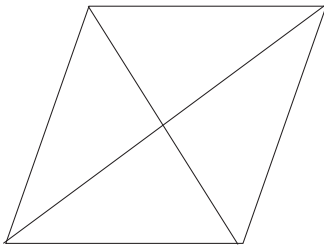
**Q10. Write the name of the 3-D shape :**

- a. It has six identical flat surfaces: \_\_\_\_\_
- b. It has one curved surface: \_\_\_\_\_
- c. It has one curved and one flat surface: \_\_\_\_\_
- d. It has one curved surface and two flat surfaces: \_\_\_\_\_

## ANSWERS

1. a. False                                      b. True                                      c. True                                      d. True
2. a. C    b. one                                      c.  $\overline{AF}$
3. 6 pairs, AB and GH, AL and GF
4. a.  $x \parallel y$                                       b.  $a \perp x, b \perp y$                                       c. a and x, b and y
5. a. Minimum: 1, Maximum: 1  
b. Minimum: 1, Maximum: 3
6. a. square, rhombus                                      b. opposite                                      c.  $90^\circ$                                       d. 3, 3

7.



8 triangles

8.

Object	3-D shape	Net
A cellphone	Cuboid	
A can of paint	Cylinder	

9.

Number of sides	Name of the polygon
3	Triangle
8	Octagon
5	Pentagon
7	Septagon

10. a. Cube                                      b. Sphere                                      c. Cone                                      d. Cylinder