



UNIT – 4 and 13

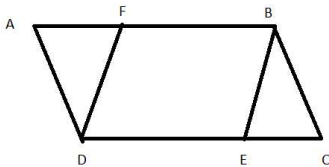
Basic Geometrical Ideas and Symmetry

A. Select the correct answer:

1. Which of following is a correct statement?

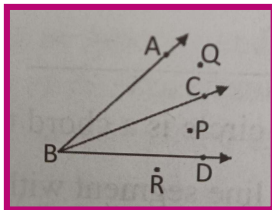
- a. Every ray has a definite length
- b. Every line segment has a definite length
- c. Every line has a definite length
- d. Two parallel lines have a definite length

2. The line segments which are not parallel in the given figure consist of parallelograms ABCD and DEBF are



- a. AF, EC
- b. AB, AD
- c. AD, BC
- d. FD, BE

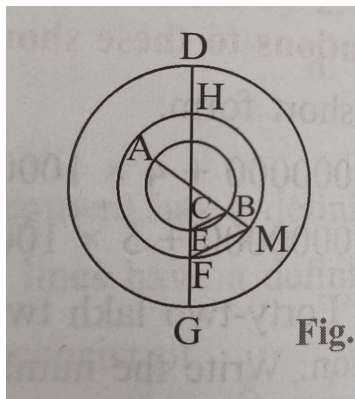
3. The point that lies in the interior of $\angle ABC$ is



- a. P
- b. Q
- c. R
- d. C

B. Answer the following :

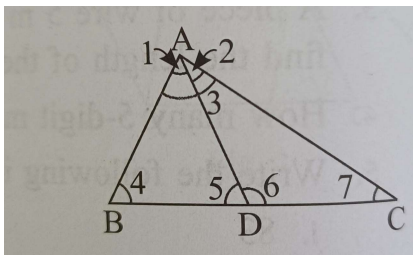
1. A _____ curve does not cross itself.
2. Observe the three concentric circles given in Fig and fill in the blanks.



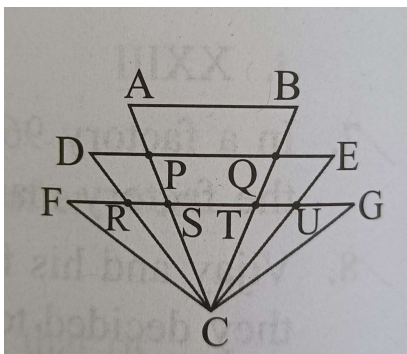
- i. C is the common _____ of all the given circles.
 - ii. _____, _____ and _____ are the radii of the smallest circle.
 - iii. CEB is the sector of the _____ circle.
 - iv. _____ is an arc of the middle circle.
 - v. _____ is the diameter of the largest circle.
 - vi. _____ is the chord of the middle circle.
 - vii. HF is the _____ of the middle circle.
 - viii. CF is the _____ of the middle circle.
3. Name the following.
 - i. A simple closed curve made up entirely of line segments.
 - ii. A line segment with its endpoints on the circle and passing through the centre of the circle.

- iii. A figure formed by two rays starting from the same point.
- iv. A polygon with the least number of sides.
- v. A line segment that connects the centre of a circle to the point on the circle.
- vi. A part of the circumference of a circle.
- vii. A line passing through a circle and intersecting the circle at two points.
- viii. The part of a circle enclosed by a chord and an arc of the circle.
- ix. The part of a circle enclosed by an arc and a pair of radii.
- x. Two or more circles with the same centre.

4. In Figure write two more names for each of the angles marked.



5. Study Figure given alongside and fill in the blanks.



- i. Points in the interior of $\triangle DEC$ are _____ and _____.
- ii. Points in the exterior of $\triangle DEC$ are _____
- iii. Points F, C, G, U, T, S and R are the point lying on _____.

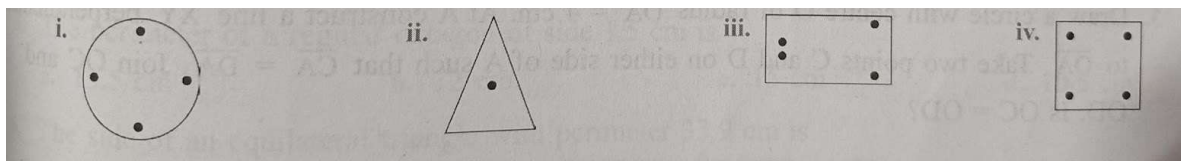
iv. Points lying on $\triangle ABC$ are _____

v. Point _____ lies in the interior of $\triangle PEC$.

vi. Vertex _____ is common to all the triangles.

vii. Point _____ lies in the interior of $\triangle DQC$.

6. Draw the lines of symmetry for each of the following figures with punched holes.



7. Draw quadrilaterals showing the line (or lines) of symmetry and write the name of the quadrilateral having

- i. only one line of symmetry
- ii. its diagonals as the only lines of symmetry
- iii. two lines of symmetry other than diagonals
- iv. more than two lines of symmetry

8. Consider all the letters of English alphabet. Make a list of all the capital letters which have

- i. only one line of symmetry
- ii. two lines of symmetry
- iii. no line of symmetry