

Question 1.

Draw rough diagrams to illustrate the following:

- (i) open simple curve
- (ii) closed simple curve
- (iii) open curve that is not simple
- (iv) closed curve that is not simple.

Solution:

- (i) open simple curve



- (ii) closed simple curve



- (iii) open curve that is not simple



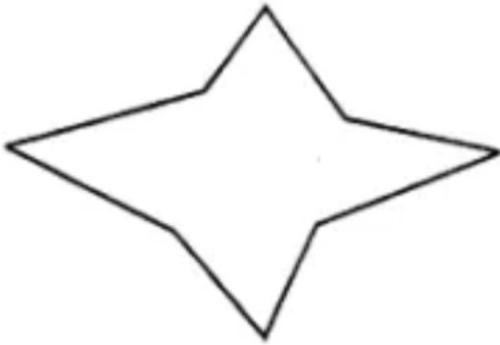
- (iv) closed curve that is not simple



Question 2.

Consider the given figure and answer the following questions:

- (i) Is it a curve?
- (ii) Is it a closed curve?
- (iii) Is it a polygon?



Solution:

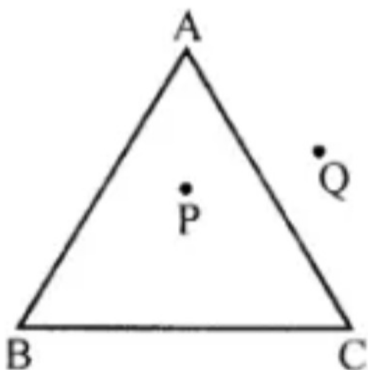
- (i) Yes, it is a curve.
- (ii) Yes, it is a closed curve.
- (iii) Yes, it is a polygon.

Question 3.

Draw a rough sketch of a triangle ABC. Mark a point P in its interior and a point Q in its exterior. Is the point A in its exterior or in its interior?

Solution:

The point A is neither in the exterior nor in the interior of triangle ABC. It is on the triangle ABC.

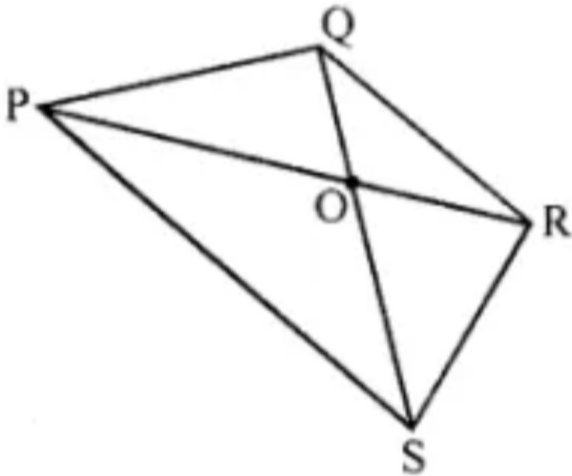


Question 4.

Draw a rough sketch of a quadrilateral PQRS. Draw its diagonals. Name them.

Solution:

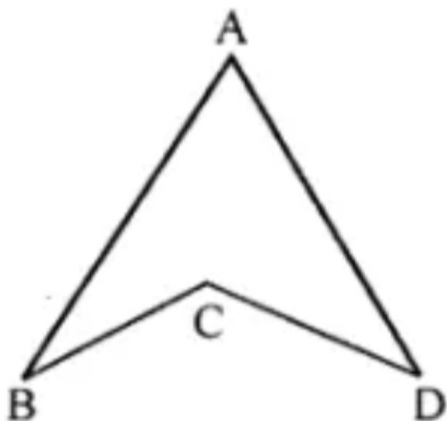
The meeting point O of the diagonals PR and QS of the quadrilateral PQRS is in the interior of the quadrilateral PQRS.



Question 5.

In context of the given figure:

- (i) Is it a simple closed curve?
- (ii) Is it a quadrilateral?
- (iii) Draw its diagonals and name them.
- (iv) State which diagonal lies in the interior and which diagonal lies in the exterior of the quadrilateral.



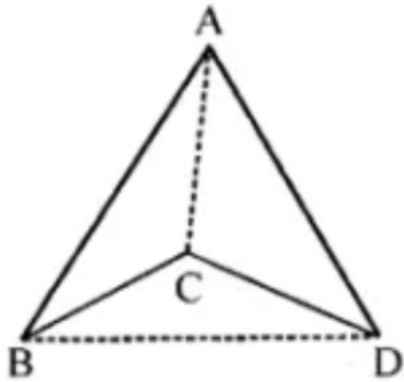
Solution:

(i) Yes

(ii) Yes.

(iii) Its diagonals are  $\overline{AC}$  and  $\overline{BD}$ .

(iv) Diagonal  $\overline{AC}$  is in the interior and diagonal  $\overline{BD}$  is in the exterior of quadrilateral ABCD.



Question 6.

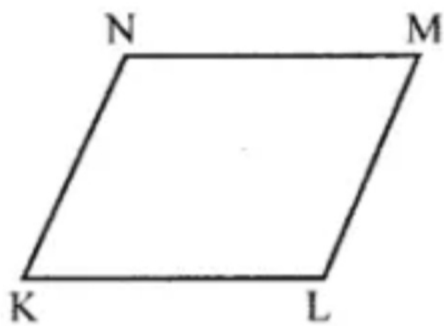
Draw a rough sketch of a quadrilateral KLMN. State,

(i) two pairs of opposite sides

(ii) two pairs of opposite angles

(iii) two pairs of adjacent sides

(iv) two pairs of adjacent angles.



Solution:

(i)  $\overline{KL}$ ,  $\overline{NM}$  and  $\overline{KN}$ ,  $\overline{ML}$

(ii)  $\angle K$ ,  $\angle M$  and  $\angle N$ ,  $\angle L$

(iii)  $\overline{KL}$ ,  $\overline{KN}$  and  $\overline{MM}$ ,  $\overline{ML}$  or  $\overline{KL}$ ,  $\overline{LM}$  and  $\overline{NM}$ ,  $\overline{ML}$

(iv)  $\angle K$ ,  $\angle L$  and  $\angle M$ ,  $\angle N$  or  $\angle K$ ,  $\angle L$  and  $\angle L$ ,  $\angle M$

etc.