Angles

Exercise 11.1

Question: 1

Give three examples of angles from your environment.

Solution:

Three examples of angles from our environment are:

(i) Angle formed by the minute and hour hands of an analog clock.

(ii) Angle formed by the two adjacent walls of a room

(iii) Angle formed by the two adjacent fingers of our hand.

Question: 2

Write the arms and the vertex of ∠LMP **given in the figure.**

Solution:

Arms of ∠LMP are MP and ML. Further, vertex is M.

Question: 3

How many angles are formed in the figures given? Name them. (fig. from book)

Solution:

(i) Three angles are formed, namely ∠ABC, ∠BAC, and ∠ACB.

(ii) Four angles are formed, namely ∠ABC, ∠ADC, ∠BCD, and ∠BAD.

(iii) Eight angles are formed
namely ∠ADC, ∠ACD, ∠DAC, ∠ACB, ∠ABC, ∠BAC¸ ∠BCD, and ∠BAD.

Question: 4

From figure, list the points which are: (fig. from book)

(i) in the interior of ∠P

(ii) in the exterior of ∠P

(iii) lie on ∠P

Solution:

(i) Points J and C lie in the interior of ∠P.

(ii) Points D and B lie in the exterior of ∠P.

(iii) Points A, P and M lie on ∠P.

Question: 5

In the figure, write another name for: (fig. from book)

(i) ∠1.

(ii) ∠2.

(iii) ∠3.

(iv) ∠4.

Solution:

(i) Another name for ∠1 is ∠BOD.

(ii) Another name for ∠2 is ∠BOC.

(iii) Another name for ∠3 is ∠AOC.

(iv) Another name for ∠4 is ∠AOD.

Question: 6

In the figure, write another name for: (fig. from book)

(i) ∠1.

(ii) ∠2.

(iii) ∠3.

Solution:

(i) ∠BPE

(ii) ∠PQC

(iii) ∠DQF

Question: 7

In the given fig., which of the following statements are true: (fig. from book)

(i) Point B in the interior of ∠AOB

(ii) Point B in the interior of ∠AOC

(iii) Point A in the interior of ∠AOD

(iv) Point C in the exterior of ∠AOB

(v) Point D in the exterior of ∠AOC

Solution:

(ii), (iv) and (v) are true statements.

(i), and (iii) are incorrect statements as B lies on ∠AOB and A lies on ∠AOD.

Question: 8

Which of the following statements are true:

(i) The vertex of an angle lies in its interior.

(ii) The vertex of an angle lies in its exterior.

(iii) The vertex of an angle lies on it.

Solution:

(iii) The vertex of an angle lies on it.

This is the only correct statement.

Question: 9

By simply looking at the pair of angles given in figure, state which of the angles in each of the pairs is greater. (fig. from book)

Solution:

(i) ∠AOB is greater than ∠DEF.

(ii) ∠PQR is greater than ∠LMN.

(iii) ∠UVW is greater than ∠XYZ.

Question: 10

By using tracing paper compare the angles in each of the pairs given in figure, (fig. from book)

Solution:

Using tracing paper, we get that:

(i) ∠PQR is greater than ∠AOB.

(ii) ∠UVW is greater than ∠LMN.

(iii) ∠RST is greater than ∠XYZ.

(iv) ∠PQR is greater than ∠EFG.