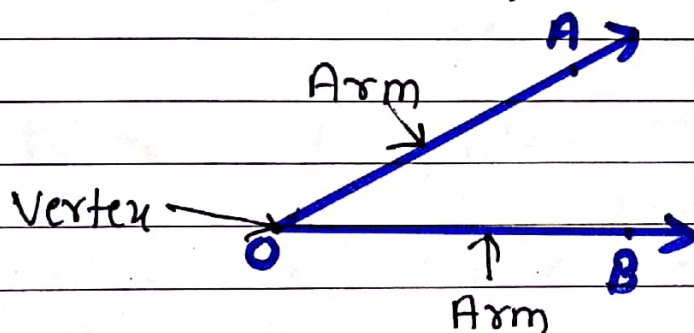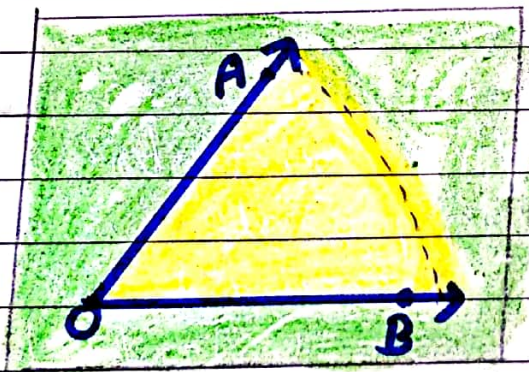## Topic - Angles -

An angle is formed by two different rays starting from the same initial point. The two rays forming the angles are called the arms or side of the angle. The common end point is the vertex of the angle.

## The Interior And Exterior Of An Angle →

Interior → The region shown by yellow colour is the interior of $\angle AOB$.

Exterior → The region shown by green colour is the exterior of the $\angle AOB$.

①

Angular Region → The interior of an angle together with its boundary is called the angular region.

Triangles → A triangle is a closed plane figure bounded by three line segments.

Side or Arm
Vertex
Angle
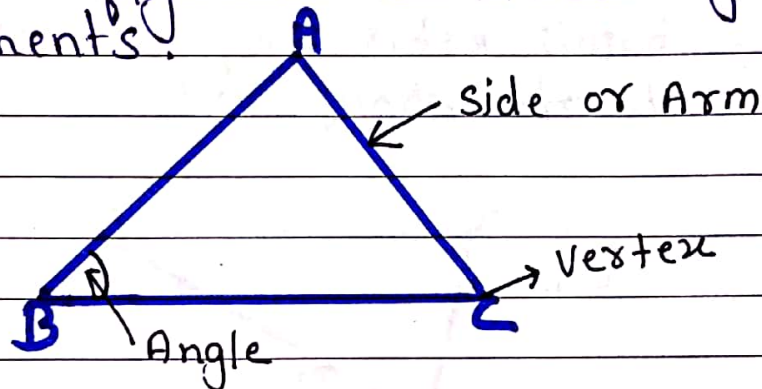
Parts of a triangle → The three sides and the three angles together are called the six parts of a triangle.

⁕ In A triangle

(I) Three line segments $\overline{AB}$, $\overline{BC}$ and $\overline{CA}$
(II) Three vertices A, B and C
(III) Three Angles $\angle ABC$, $\angle BCA$, $\angle BAC$.

Note → I) Write all the notes in your copy.
II) Do Assignment 5.3 and 5.4 in your copy.

②

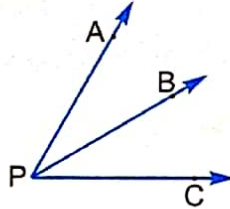**1. Multiple Choice Questions (MCQ)** Choose the correct option.

(i) A figure formed by two rays with a common initial point, is
(a) a line segment. (b) a ray. (c) a line. (d) an angle.

(ii) An angle QPR is written as ∠ P. It can also be named as
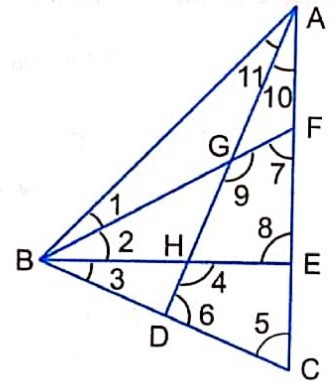(a) ∠ PQR (b) ∠ PRQ (c) ∠ RPQ (d) ∠ RQP

2. In the given figure :
(i) name the three rays.
(ii) name the three angles.

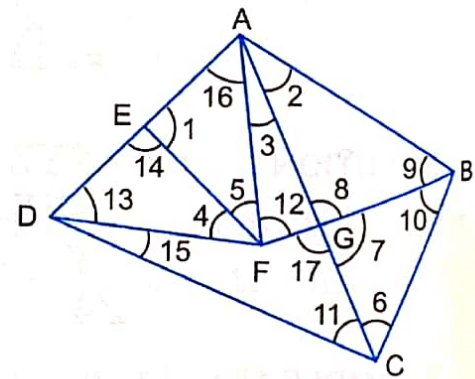**3.** In the adjoining figure, name the angles indicated
by using three letters for each :
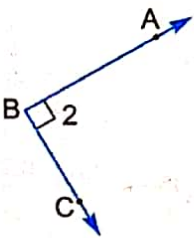(i) ∠9 (ii) ∠5 (iii) ∠11
(iv) ∠3 (v) ∠4 (vi) ∠7
(vii) ∠1 (viii) ∠10
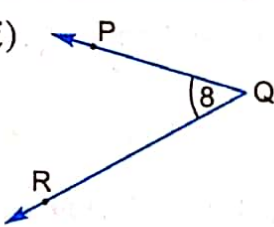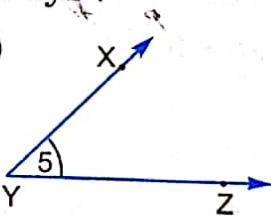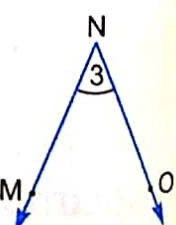
4. In the adjoining figure, name the angles indicated :
(i) ∠16 (ii) ∠4 (iii) ∠12
(iv) ∠10 (v) ∠1 (vi) ∠11
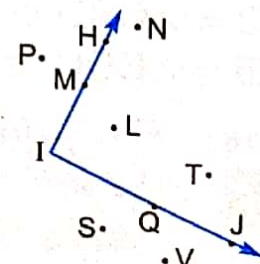(vii) ∠3 (viii) ∠15 (ix) ∠7
(x) ∠2

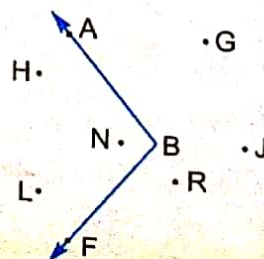**5.** Name the following angles in three different ways :
(i) (ii) (iii) (iv)

6. From the adjoining figure, list the points which are
(i) in the exterior of ∠HIJ.
(ii) in the interior of ∠HIJ.
(iii) on ∠HIJ.

7. In the adjoining figure, list the
points which are
(i) in the interior of ∠B.
(ii) in the exterior of ∠B.
(iii) lying on ∠B.

③

2. In the given triangle, name :
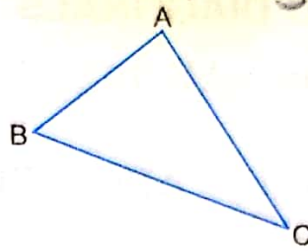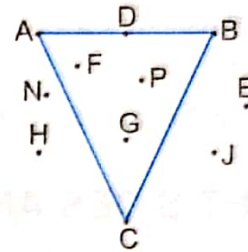   (*i*) side opposite to ∠B.
   (*ii*) angle opposite to side BC.
   (*iii*) side opposite to vertex A.
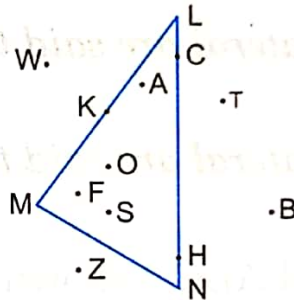   (*iv*) vertex opposite to side AB.

3. In the adjoining figure, name :
   (*i*) points which lie in the interior of Δ ABC.
   (*ii*) points which lie in the exterior of Δ ABC.
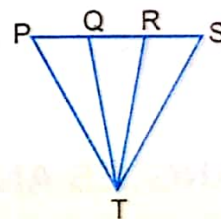   (*iii*) points which lie on Δ ABC.

4. In the figure, name the points which are :
   (*i*) on ΔLMN.
   (*ii*) in the exterior of ΔLMN.
   (*iii*) in the interior of ΔLMN.

5. In the adjoining figure, name :
   (*i*) all the triangles.
   (*ii*) all the angles.
   (*iii*) all the line segments.
   (*iv*) triangles which have ∠S as common.

(4)