Lesson - 11
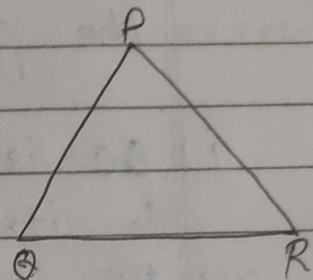### (Triangles and Parallel Lines)

Opposite sides and opposite vertices :-

Consider △ PQR.
   Vertices - P, Q, R
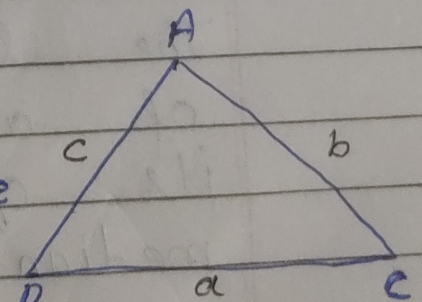   Side - PQ QR, RP

We say, Side PQ is opposite to the vertex R and Vertex R is the opposite to the side PQ. Similarly, vertex P is opposite to side QR and side QR is opposite to vertex P. Vertex Q is opposite to the side PR and side PR is opposite to vertex Q.

Perimeter of a Triangle

The Sum of the lengths of three sides of a triangle is called its perimeter. If a triangle has sides of lengths a, b and c units, then its perimeter P is given by
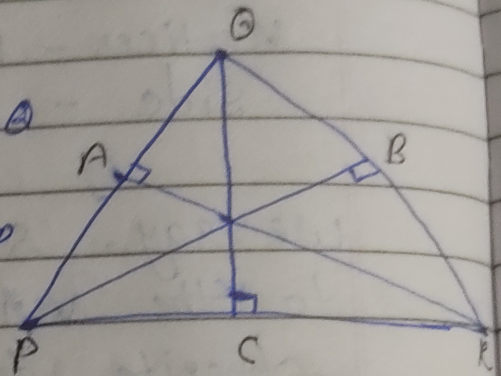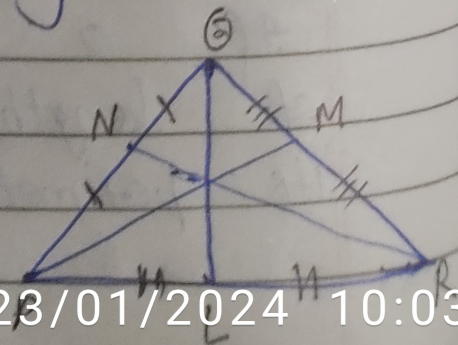

$$P = a + b + c$$

Altitude of a Triangle

The perpendicular drawn from the vertex of a triangle to the opposite side is called an altitude. In the given triangle

(i) QC is perpendicular from Q to its opposite side PR.

(ii) PB is perpendicular from P to its opposite side QR.

(iii) RA is perpendicular from R to its opposite side PQ.

therefore, QC, PB and RA are altitude of $\triangle$ PQR.

Median of a Triangle :-

The line segment joining any vertex of a triangle to the mid-point of its opposite side is called the median of the triangle.

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In the given figure, L, M and N are the mid-point of side PR, RQ and PQ respectively. Line segment QL joining vertex Q to mid-point L of its opposite side PR is a median. Similarly RN and PM are medians.