

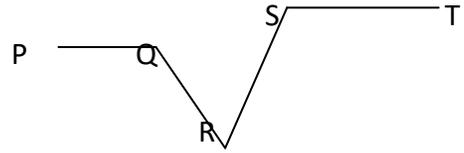
Delhi Public School, Jammu
Session- (2019-20)
ASSIGNMENT -II

Subject: Mathematics

Topics: 1. Coordinate Geometry
2. Lines and Angles

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1. Represent (2,3), (-2,3),(-2,-3) and (2,-3) in Cartesian plane.
2. Give name of quadrant of above points.
3. Give mirror image of (3,5) through X-axis and through Y-axis.
4. Plot A(0,2), B(-2.5,0) and C(3.5,0) in graph and find area of triangle ABC.
5. The perpendicular distance of a point from the x-axis is 3 units and perpendicular distance from y-axis is 2 units. Plot points on graph.
6. Bisectors of $\angle ABC$ and $\angle ACB$ intersect at O. prove that $\angle BOC = 90^\circ + \frac{1}{2} \angle A$.
7. In ΔPQR , $\angle Q > \angle R$ and PA is bisector of $\angle QPR$ intersecting QR at A and $PM \perp QR$. Prove that $\angle APM = \frac{1}{2}(\angle Q - \angle R)$.
8. Prove that sum of angles of triangle is 180° .
9. Prove that when two lines intersect then vertically opposite angles are equal.
10. Two sides AB and AC of ΔABC are produced to P and Q respectively. The bisector of $\angle PBC$ and $\angle QCB$ intersect at O, prove that $\angle BOC = 90^\circ - \frac{1}{2} \angle A$.
11. POQ is a line. Ray OR is perpendicular to PQ at O. OS is another line lying between ray OP and OR. Prove that $\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$.
12. $PQ \parallel ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$, find $\angle QRS$.



13. $\angle X = 62^\circ$ and $\angle XYZ = 54^\circ$. If YO and ZO are the bisectors of $\angle XYZ$ and $\angle XZY$ respectively of triangle XYZ, Find $\angle OZY$ and $\angle YOZ$.
14. Side QR of ΔPQR is produced to S. If bisector of $\angle PQR$ and $\angle PRS$ meet at T, then prove that $\angle QTR = \frac{1}{2} \angle QPR$.
15. If $(2x+3)^\circ$ and $(3x+2)^\circ$ forms a linear pair, find x.