

Comprehensive Test Series-01 Lines and Angles

TIME: 1 hr.

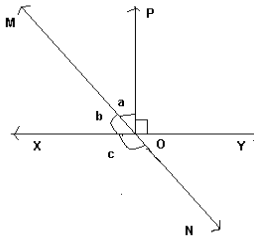
MM: 36

General Instructions:

- All Questions are compulsory.
- Marks are given along with the questions individually.
- Use of calculator is not permitted.

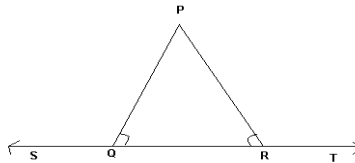
1. Lines XY and MN intersect at O. If $\angle POY = 90^\circ$ and $a : b = 2 : 3$, find c.

3 Marks



2. $\angle PQR = \angle PRQ$, then prove that $\angle PQS = \angle PRT$.

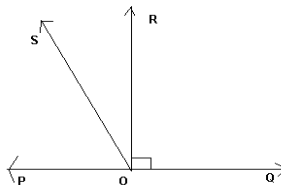
3 Marks



3. POQ is line. Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that

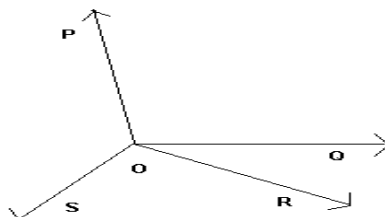
3 Marks

$$\angle ORS = \frac{1}{2} (\angle QOS - \angle POS).$$



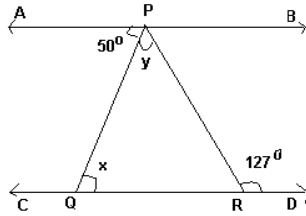
4. OP, OQ, OR and OS are four rays. Prove that $\angle POQ + \angle QOR + \angle SOR + \angle POS = 360^\circ$.

3 Marks



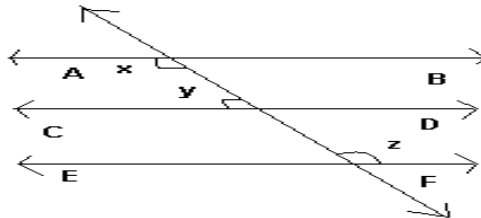
5. If $AB \parallel CD$, $\angle APQ = 50^\circ$ and $\angle PRD = 127^\circ$, find x and y .

3 Marks



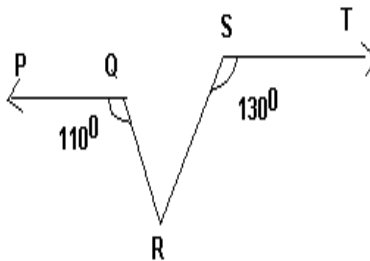
6. If $AB \parallel CD$, $CD \parallel EF$ and $y : z = 3:7$, find x .

3 Marks



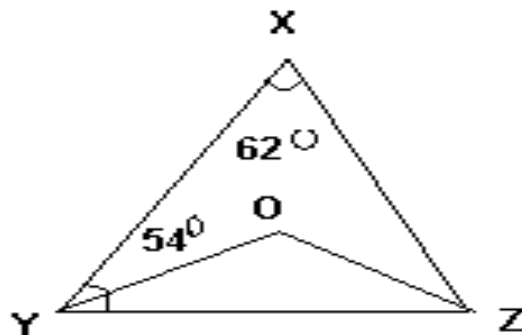
7. If $PQ \parallel ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$, find $\angle QRS$.

3 Marks

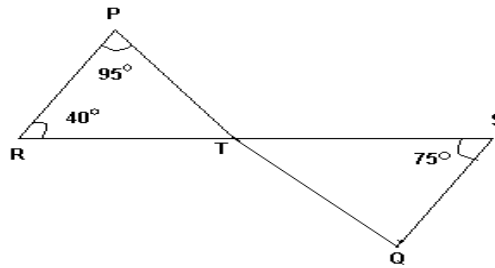


8. $\angle X = 62^\circ$, $\angle XYZ = 54^\circ$. IF YO and ZO are the bisector of $\angle XYZ$ and $\angle XZY$ respectively of $\triangle XYZ$, find $\angle OZY$ and $\angle YOZ$.

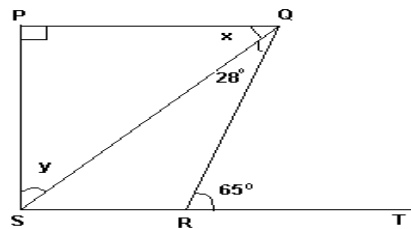
3 Marks



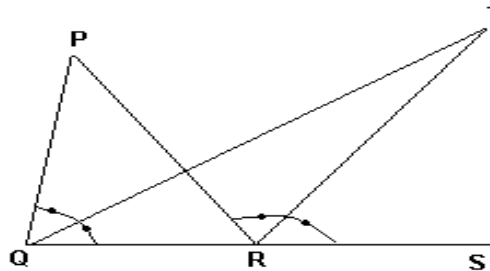
9. If lines PQ and RS intersect at point T, such that $\angle PRT = 40^\circ$, $\angle RPT = 95^\circ$ and $\angle TSQ = 75^\circ$, find $\angle SQT$. 3 Marks



10. If $PQ \perp PS$, $PQ \parallel SR$, $\angle SQR = 28^\circ$ and $\angle QRT = 65^\circ$ then the values of x and y. 3 Marks



11. The side QR of $\triangle PQR$ is produced to a point S. If the bisectors of $\angle PQR$ and $\angle PRS$ meet at point T, then prove that $\angle QTR = \frac{1}{2} \angle QPR$. 3 Marks



12. The sum of the angles of a triangle is 180° . 3 Marks