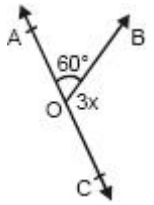
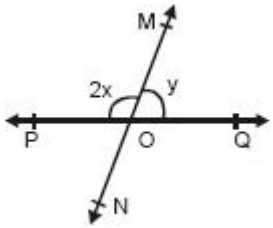
Class 9: Maths
LINES AND ANGLES QUESTIONS



1. In the given figure, AOC is a line, find x.

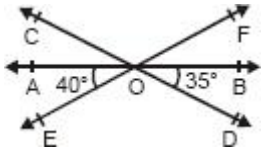
2. In the given figure, $\overline{PQ}$ and $\overline{MN}$ intersect at O.

(a) Determine y, when x = 60°.



(b) Determine x, when y = 40°.

3. In the given figure, lines Ab, CD and EF intersect at O.



Find the measure of ∠AOC, ∠COF.

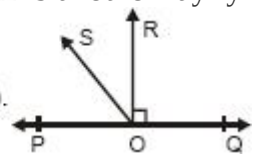
4. The exterior angles obtained on producing the base of a triangle both ways are 100° and 120°. Find all the angles.

5. ΔABC is right angled at A and AL ⊥ BC. Prove that ∠BAL = ∠ACD.

6. If two parallel lines are intersected by a transversal, prove that the bisectors of the two pairs of interior angles enclose a rectangle.

7. The angles of a triangle are arranged in ascending order of magnitude. If the difference between two consecutive angles is 10°, find all the three angles.

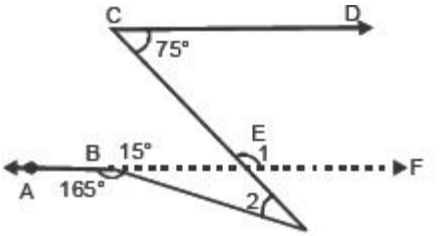
8. In the given figure, POQ is a line. Ray $\overline{OR} \perp PQ$, $\overline{OS}$ is another ray lying between rays $\overline{OP}$ and $\overline{OR}$. Prove that $\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$.



9. Can a triangle have two obtuse angles? Give reason for your answer.

10. How many triangles can be drawn having its angles as 45°, 64° and 72°? Give reason for your answer.

11. In the following figure AB || CD. Find the measure of ∠BOC.



12. If P,Q and R are collinear points, then name all the line segments determined by them.

13. Find the complement of 36°

14. Find the measure of an angle which is 26° more than its complement.

15. If a ray CD stands on a line AB, then prove that
Angle ACD= angle BCD=180°

16. If two lines intersect prove that
Angle AOD=angle BOC

17. If PQ and RS are two intersecting lines which meet ar point O. If angle POR :angle ROQ= 5:7. Find all the angles.

18. Prove that the angle formed by the bisector of interior angle A and the bisector of exterior angle B of a triangle ABC is half of angle C.

19. Sides QP and RQ of triangle PQR are produced to point S and T respectively. If angle SPR= 35° and angle PQT=70°find angle SQR and angle PRQ.

20. of the three angles of a triangle, one is double the smallest and another is thrice times the smaller. Find the angles.