

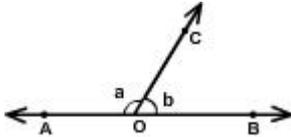
JSUNIL TUTORIAL

Punjabi colony gali no. 01

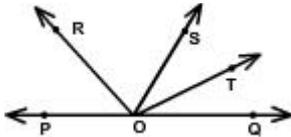
Class IX

Lines and angles

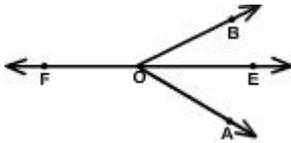
- Q1. Find the measure of an angle, if seven times its complement is 10 less than three times its supplement.
- Q2. In the given figure, $\angle AOC$ and $\angle BOC$ form a linear pair. If $a - b = 80$ find the value of a and b .



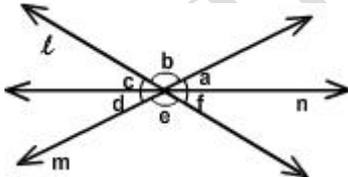
- Q3. In the figure, ray OS stands on a line POQ. Rays OR and OT are the angle bisectors of $\angle POS$ and $\angle SOQ$ respectively. If $\angle POS = x$. Find $\angle ROT$.



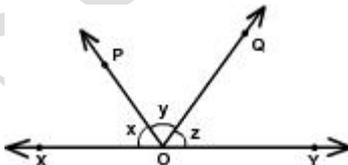
- Q4. The ray OE bisects $\angle AOB$ and OF is the ray opposite to OE, show that $\angle FOB = \angle FOA$.



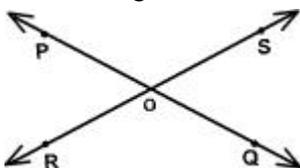
- Q5. In the figure three coplanar lines intersect in a common point, forming angles as shown. If $a = 45$, $e = 50$ then find angles b , c , d and f .



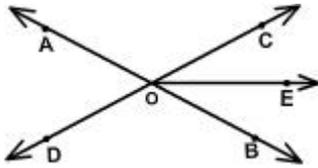
- Q6. In the given figure, $x : y : z = 5 : 4 : 6$. If XOY is a straight line, find the values of x , y and z .



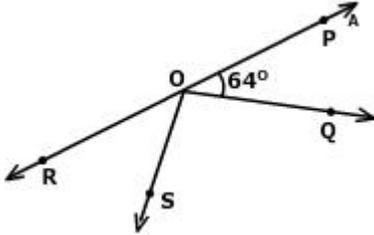
- Q7. Two lines PQ and RS intersect at a point O such that $\angle POS + \angle ROQ = 280$. Find all four angles.



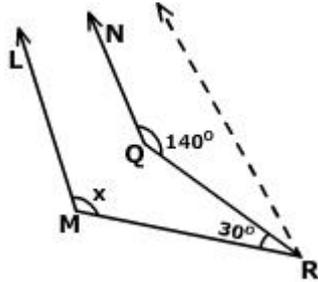
- Q8. Two straight lines AB and CD intersect each other at point O. If $\angle AOC = 48$ and OE bisects $\angle BOC$, find $\angle EOD$.



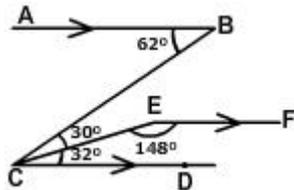
Q9. $\angle POQ = 64^\circ$, Arm PO is produced upto point R and OS is the bisector of $\angle QOR$. Find the measure of $\angle POS$.



Q10. In the given figure $LM \parallel NQ$. Find the value of x .

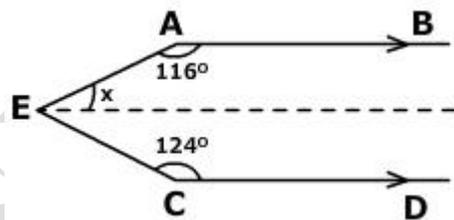


Q11. In the given figure, prove that $AB \parallel EF$.

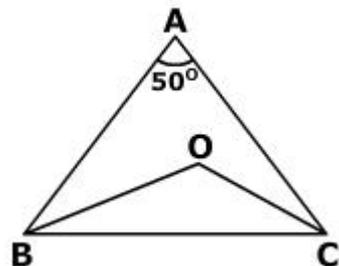


Q12. If the arms of one angle are respectively parallel to the arms of another angle, show that the two angles are either equal or supplementary.

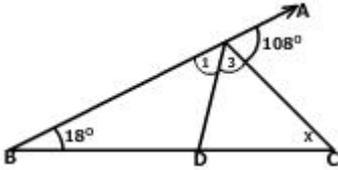
Q13. If $AB \parallel CD$, find the value of x .



Q14. In the figure, the bisectors of $\angle B$ and $\angle C$ meet at O. Find $\angle BOC$.



- Q15. In the given figure, AD divides $\angle BAC$ in the ratio 1:3 and $AD = DB$. Determine the value of x .



- Q16. If the sides of a triangle are produced in order, prove that the sum of the exterior angles so formed is equal to four right angles.
- Q17. If one angle of a triangle is equal to the sum of the other two angles, show that the triangle is a right angled triangle.
- Q18. Two angles of a triangle are equal and the third angle is greater than each one of them by 18° . Find all the angles.
- Q19. If two straight lines are perpendicular to the same line, prove that they are parallel to each other.
- Q20. If two parallel lines are intersected by a transversal, prove that the bisectors of the two pairs of interior angles enclose a rectangle.