Q1.   Find the measure of an angle, if seven times its complement is 10 less than three times its supplement.
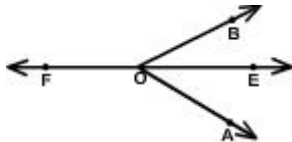
Q2.   In the given figure, < AOC and < BOC form a linear pair. If a−b = 80 find the value of a and b.
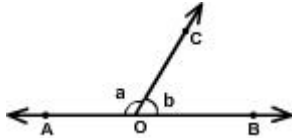
Q3.   In the figure, ray OS stands on a line POQ. Rays OR and OT are the angle bisectors of < POS and < SOQ respectively.
If < POS = x. Find < ROT.
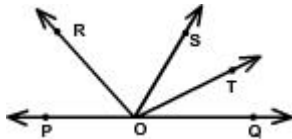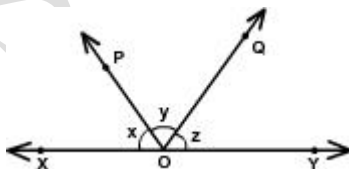
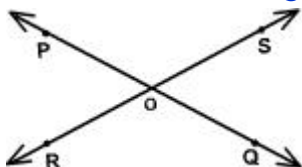Q4.   The ray OE bisects < AOB and OF is the ray opposite to OE, show that < FOB= < FOA.

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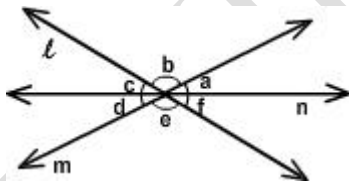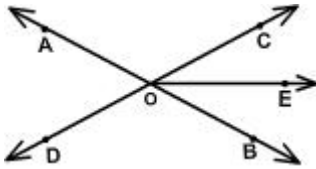
Q6.   In the given figure, x:y:z = 5:4:6. If XOY is a straight line, find the values of x , y and z .

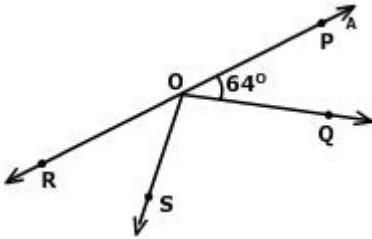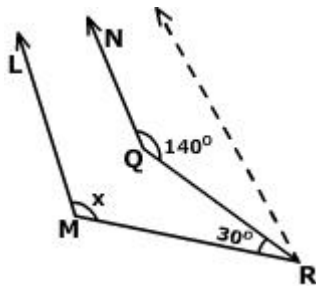Q7.   Two lines PQ and RS intersect at a point O such that < POS + < ROQ = 280. Find all four angles.

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

Q9. <POQ=64 , Arm PO is produced upto point R and OS is the bisector of <QOR. Find the measure of <POS.

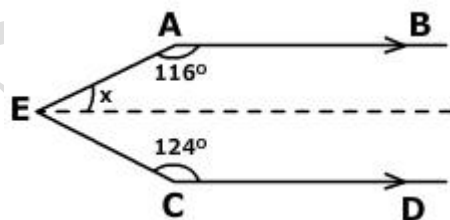**Q10.** In the given figure LM II NQ. Find the value of x.

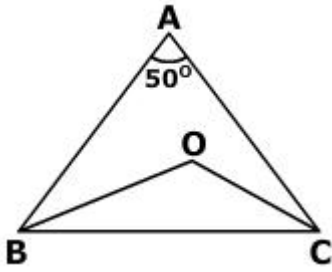**Q11.** In the given figure, prove that AB II EF.
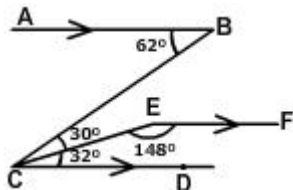
Q12. If the arms of one angle are respectively parallel to the arms of another angle, show that the two angles are either equal or supplementary.
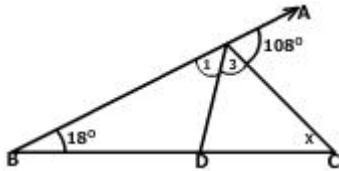
Q13. If AB II CD, find the value of x.

Q14. In the figure, the bisectors of < Band < C meet at O. Find < BOC.

Q15. In the given figure, AD divides < BAC in the ratio 1:3and 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.

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