SUNRISE EDUCATION CENTRE

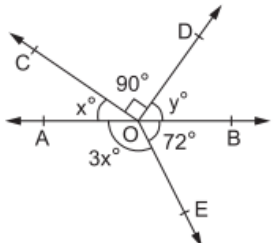
An Institute for 9th – 12th MATHEMATICS (Basic/Standard, Core/Applied) -By Er. Mohit Nariyani.

Worksheet - I

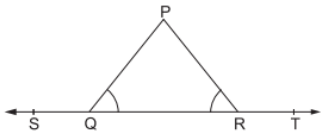
Chapter-6

LINES & ANGLES

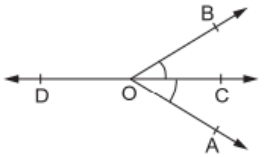
1. Two supplementary angles are in the ratio 3 : 2. Find the angles.
2. Find the measure of an angle which is 32° less than its supplement.
3. The supplement of an angle is one third of the given angle. Find the measures of the given angle and its supplement.
4. Find the angle whose complement is one third of its supplement.
5. Find the value of x for which the angles $(2x - 5)°$and $(x - 10)°$ are the complementary angles1.
6. Two adjacent angles on a straight line are in the ratio 5:4. Find the measure of each one of these angles.
7. Calculate $\angle AOC, \angle BOD \text{ and } \angle AOE$ in the adjoining figure, it is being given that $\angle COD = 90°, \angle BOE = 72°$ and AOB is a straight line.



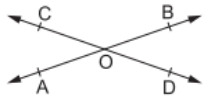
8. In the given fi gure, if $\angle PQR = \angle PRQ$, then prove that $\angle PQS = \angle PRT$.



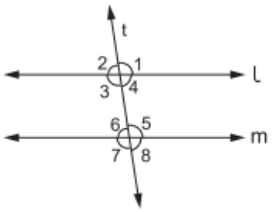
9. In the given figure, ray OC is the bisector of $\angle AOB$ and OD is the ray opposite to OC. Show that $\angle AOD = \angle BOD$.



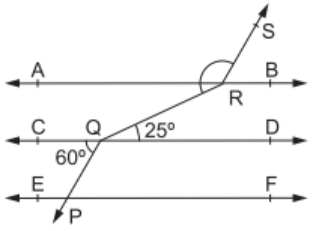
10. Two lines AB and CD intersect at a point O such that $\angle BOC + \angle AOD = 280°$, as shown in the figure. Find all the four angles.



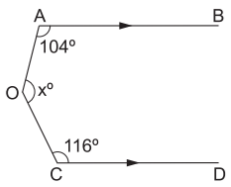
11. In the given figure, l || m and a transversal t cuts them. If $\angle 1 : \angle 2 = 5 : 4$, find the measure of each of the marked angles.



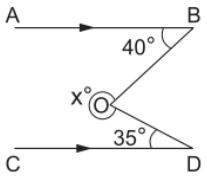
12. In the given figure, AB || CD || EF, PQ || RS, $\angle RQD = 25°$ and ∠CQP = 60°. Find ∠QRS.



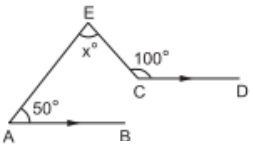
13. In the given figure, AB || CD and $\angle AOC = x$. If $\angle OAB = 104°$ and $\angle OCD = 116°$, find the value of x.



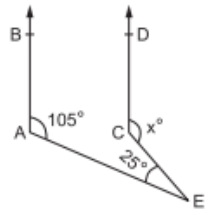
14. In the given figure, AB || CD, $\angle ABO = 40°$, $\angle CDO = 35°$. Find the value of the reflex $\angle BOD$ and hence the value of x.



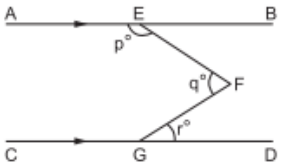
15. In the given figure, AB || CD , $\angle BAE = 50°, \angle AEC = x \text{ and } \angle ECD = 100°$. Find the value of x.



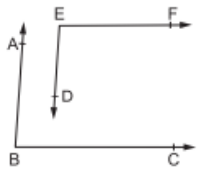
16. In the given figure, AB || CD ,$\angle EAB = 105°, \angle AEC = 25°$ and $\angle ECD = x°$. Find the value of x.



17. In the given figure, AB || CD . Prove that $p + q - r = 180$.



18. In the given figure, BA || ED and BC || EF . Show that $\angle ABC + \angle DEF = 180$



19. In the given figure, AB || CD and EF || GH . Find the values of x, y, z and t.