

Work Sheet

Class: IX

Chapter:- Lines And Angles

Q01: The complement of an angle is $\frac{1}{4}$ of its supplement. Find the angle.

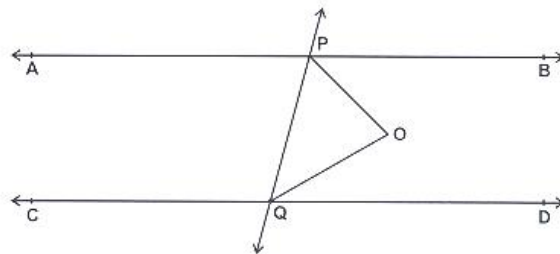
Q02: The angles of a supplementary pair are in the ratio 3:2. Find the angles.

Q03: 4 times the complement of an angle is equal to its supplement. Find the angle.

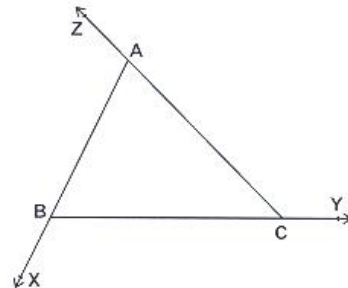
Q04: Angles of a Linear pair are in the ratio 3:2. Find the angles.

Q05: An Exterior angle of a triangle is 108° and the interior opposite angles are in the ratio 4:5. Find the angles of the triangle.

Q06: $AB \parallel CD$. The bisectors of $\angle BPQ$ and $\angle DQP$ meet at O. Prove that $\angle POQ = 90^\circ$.

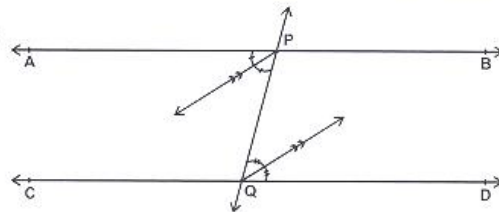


Q07: The sides of $\triangle ABC$ are produced as shown in the figure. Prove that $\angle CBX + \angle ACY + \angle CAZ = 360^\circ$.

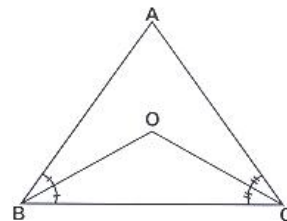


Q08: Two lines are intersected by transversal such that the bisectors of a pair of corresponding angles are equal. Prove that the lines are parallel.

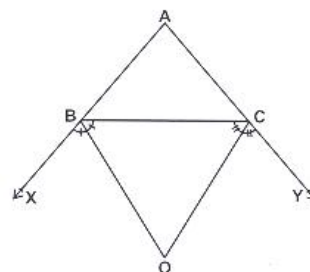
Q09: Lines AB and CD are intersected by the transversal PQ such that the bisectors of $\angle APQ$ and $\angle DQP$ are parallel. Prove that $AB \parallel CD$.



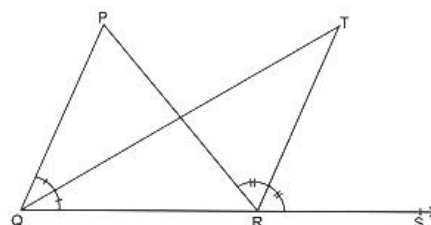
Q10: The bisectors of $\angle B$ and $\angle C$ meet at O . Prove that $\angle BOC = 90^\circ + \frac{1}{2} \angle A$.



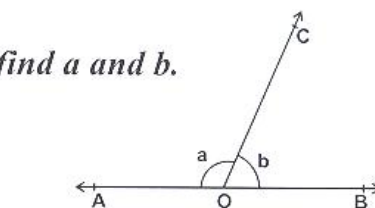
Q11: The bisectors of the exterior angles $\angle CBX$ and $\angle BCY$ meet at O . Prove that $\angle BOC = 90^\circ - \frac{1}{2} \angle A$.



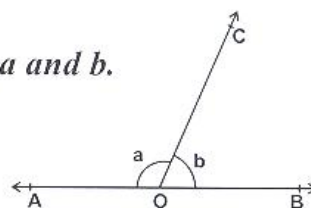
Q12: PQRS is a parallelogram. The bisectors of $\angle P$ and $\angle Q$ meet at O . Prove that $\angle POQ = 90^\circ$.



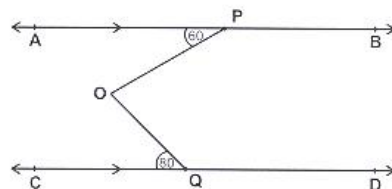
Q13: The bisectors of $\angle PQR$ and $\angle PRS$ meet at O . Prove that
1) $\angle QTR = \frac{1}{2} \angle PQR$. 2) If $\angle QTR = 40^\circ$ find $\angle QPR$. $\frac{1}{2} \angle QPR$



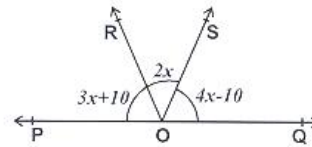
Q14: AOB is a straight line. If $a - b = 40^\circ$ find a and b .



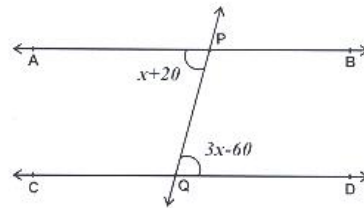
Q15: $AB \parallel CD$. $\angle APO = 60^\circ$
 $\angle CQO = 80^\circ$. Find reflex $\angle POQ$.



Q16: POQ is a straight line. Find the value of x .



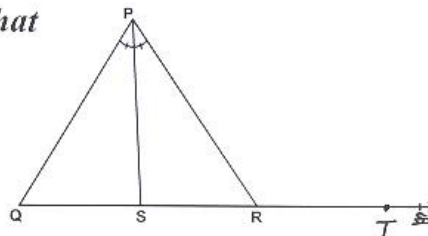
Q17: $AB \parallel CD$, $\angle APQ = x + 20$ and $\angle DQP = 3x - 60$. Find x .



Q18: PS is the bisector of $\angle QPR$. Prove that

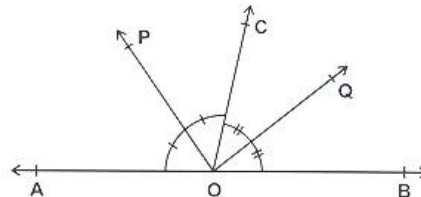
1} $\angle QPS + \angle PSR = \angle PRS$, $\angle PRT$

2} $\angle PQS + \angle PRS = 2\angle PSR$
 $\angle PRT$



Q19: In $\triangle ABC$, $6\angle A = 3\angle B = 2\angle C$. Find the angles.

Q20: AOB is a straight line. If $\overline{OP}$ and $\overline{OQ}$ are bisectors of $\angle AOC$ and $\angle BOC$ respectively. Prove that $\angle POQ = 90^\circ$.



Prepared by: Roy Mathew