Work Sheet

Class: IX  
Chapter: Lines And Angles

Q01: The complement of an angle is 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||CD. The bisectors of ∠BPQ and ∠DQP meet at O. Prove that ∠POQ = 90°.

Q07: The sides of ΔABC are produced as shown in the figure. Prove that
∠CBX + ∠ACY + ∠CAZ = 360°.

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 ∠APQ and ∠DQP are parallel. Prove that AB||CD.
Q10: The bisectors of $\angle B$ and $\angle C$
mee 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||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) \( \angle PQS + \angle PRS = 2 \angle PSR \)

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 \( \angle POQ = 90^\circ \).

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