1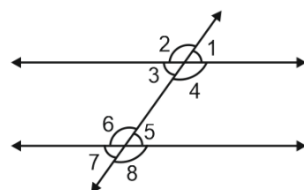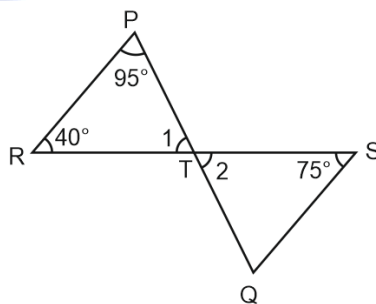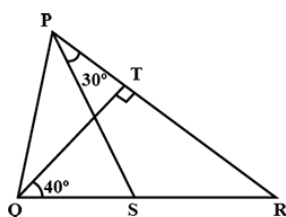. It is given that $\angle XYZ = 64^\circ$ and X Y is produced to point P. Draw a figure from the given information. If ray Y Q bisects $\angle ZYP$. Find $\angle XYQ$ and reflex $\angle QYP$.

2. The correct statement is-
   (a) A line segment has one end point only.
   (b) The ray AB is the same as the ray BA.
   (c) Three points are collinear if all of them lie on a line.
   (d) Two lines are coincident if they have only one point in common.

3. One angle is five times its supplement. The angles are-
   (a) $15^\circ, 75^\circ$ (b) $30^\circ, 150^\circ$ (c) $36^\circ, 144^\circ$ (d) $160^\circ, 40^\circ$

4. In figure if $m \parallel n$ and $\angle 1 : \angle 2 = 1 : 2$. The measure of $\angle 8$ is


   (a) 120° (b) 60° (c) 30° (d) 45°

5. In figure if lines P Q and R S intersect at point T. Such that $\angle PRT = 40^\circ, \angle RPT = 95^\circ$ and $\angle TSQ = 75^\circ$, find $\angle SQT$.


6. In figure, if $QT \perp PR, \angle TQR = 40^\circ$ and $\angle SPR = 50^\circ$ find x and y.

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1

7. In figure sides QP and RQ of $\triangle PQR$ are produced to points S and T respectively if $\angle SPR = 135^\circ$ and $\angle PQT = 110^\circ$, find $\angle PRQ$.
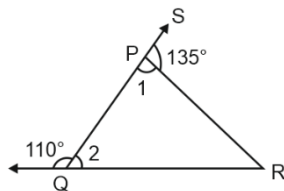

8. In figure lines PQ and RS intersect each other at point 0. If $\angle POR : \angle ROQ = 5 : 7$. Find all the angles.
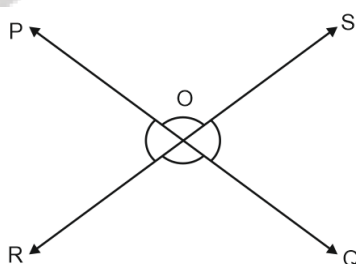
9. In figure ray O S stands on a line P O Q, ray O R and ray O T are angle bisector of $\angle POS$ and $\angle SOQ$ respectively. If $\angle POS = x$, find $\angle ROT$.
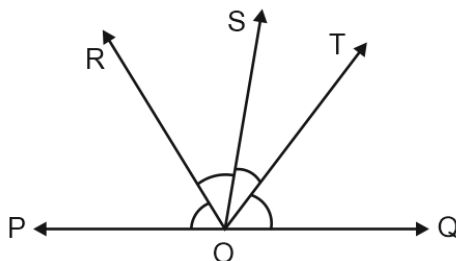
10. If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, then prove that the two lines are parallel.

11. In figure the sides Q R of ΔPQR is produced to a point S. If the bisectors of $\angle PQR$ and $\angle PRS$ meet at point T. Then prove that

$$\angle QTR = \frac{1}{2}\angle QPR$$
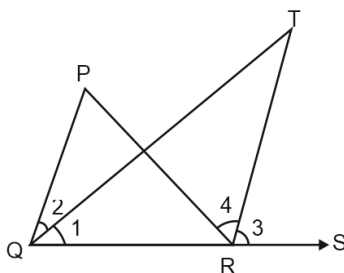
12. In figure P Q and R S are two mirror placed parallel to each other. An incident ray A B striker the mirror P Q at B , the reflected ray moves along the path B C and strikes the mirror R S at C and again reflects back along C D. Prove that $AB \parallel CD$.