1. AOB is a straight line. Find x and also the measure of each angle.
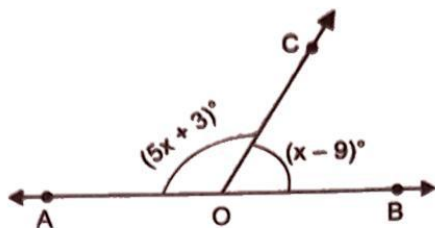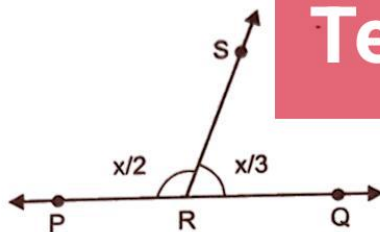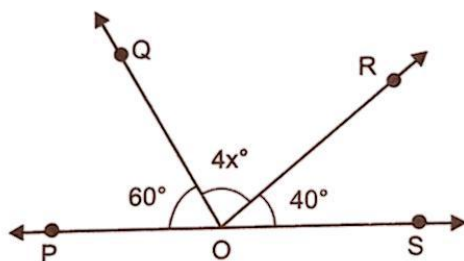

2. Determine x in the given figure

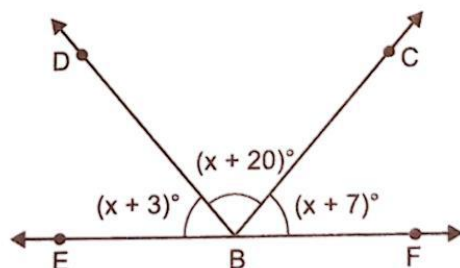Teach san ban

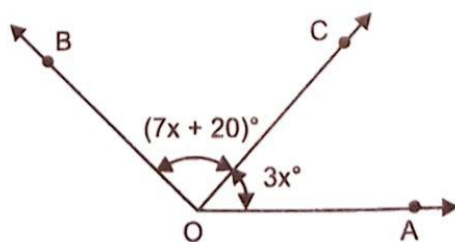**3.** In the given figure, POS is a line, determine the value of x.
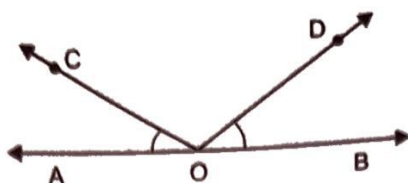

4. In figure, find the value of x.   [CBSE 2010, 2011]

5. In the given figure, if $\angle BOC = 7x° + 20°$ and $\angle COA = 3x°$, then the value of x for which OB becomes a straight line is ....
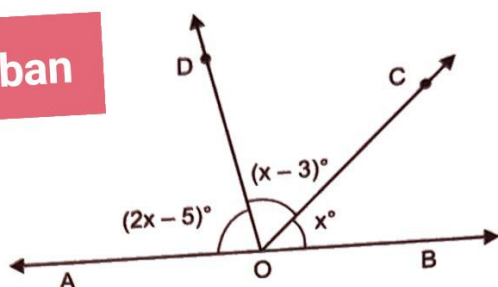
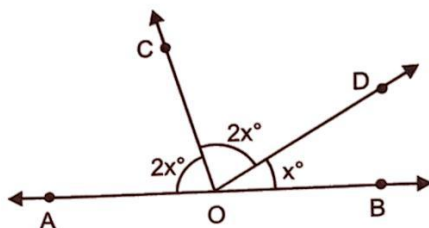**6.** In the given figure, $\angle AOC + \angle BOD = 70°$. Find $\angle COD$.

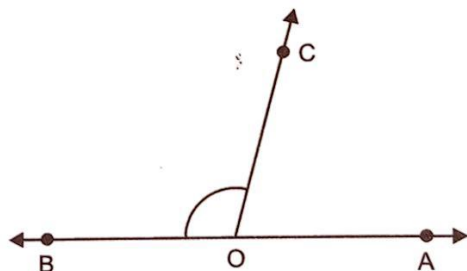**7.** Find the values of $\angle BOC$, $\angle COA$ and $\angle DOA$, where AOB is a straight line.
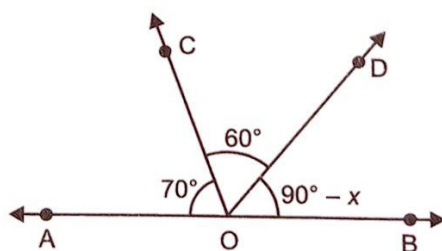
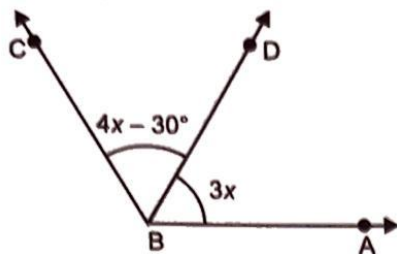**8.** In the given figure, find x and also the measure of each angle.

9. In the given figure, BOA is a straight line and $\angle BOC$ is greater than $\angle COA$ by $60°$. Find $\angle BOC$.
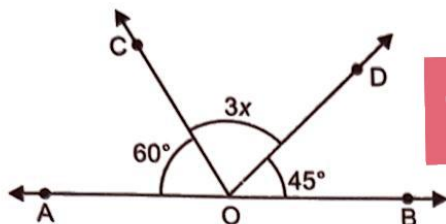

10. In the given figure, AOB is a straight line. Find the value of x.

11. In the given figure, find the value of x which would make ABC a line.
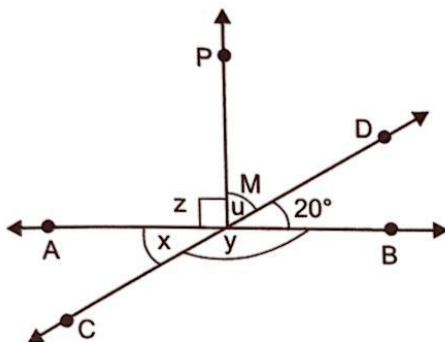

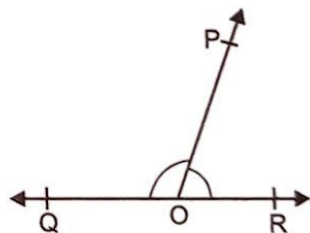**12.** In the given figure, AOB is a line. Find the value of x.

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13. In the given figure, lines AB and CD intersect at M and PM $\perp$ AB. If $m\angle DMB = 20°$, find the angles x, y, z and u.
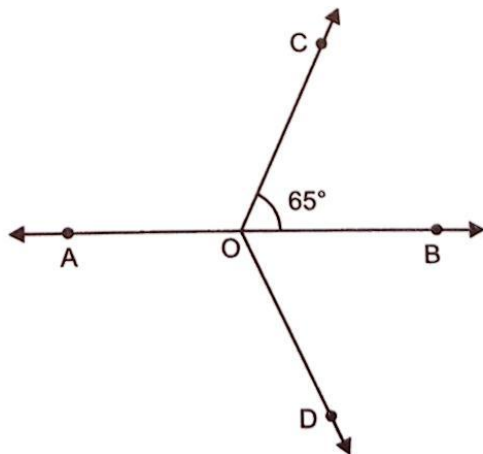

14. In the given figure, if OP stands on the line QR such that

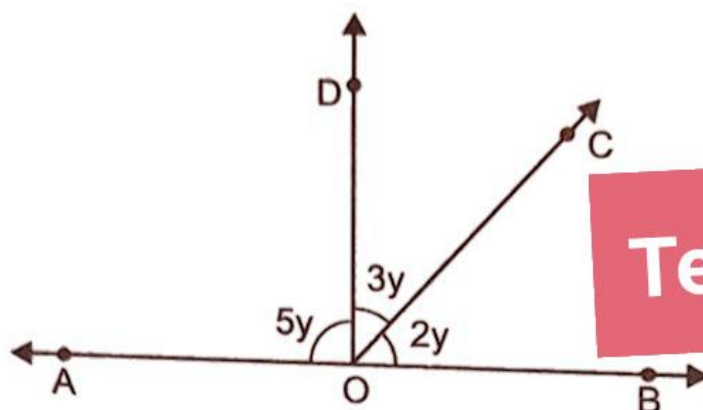$\angle POR : \angle QOP = 4:5$, show that $\angle QOP - \angle POR =$ $\frac{1}{9}(\angle QOR)$.

15. In the given figure, line AB bisects $\angle COD$. If $\angle BOC = 65°$, find the measures of $\angle AOD$ and $\angle AOC$.
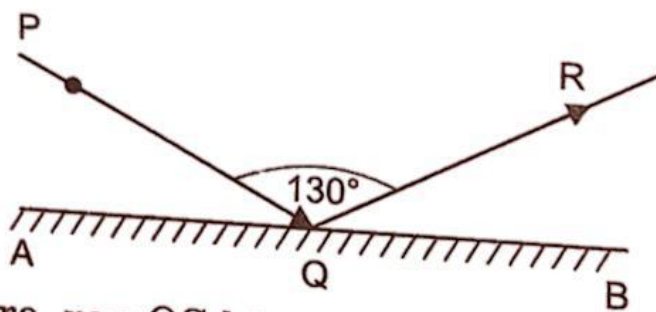
16. In the given figure, if AOB is a line, then find the measure of ∠BOC, ∠COD and ∠DOA.   [*CBSE 2011*]

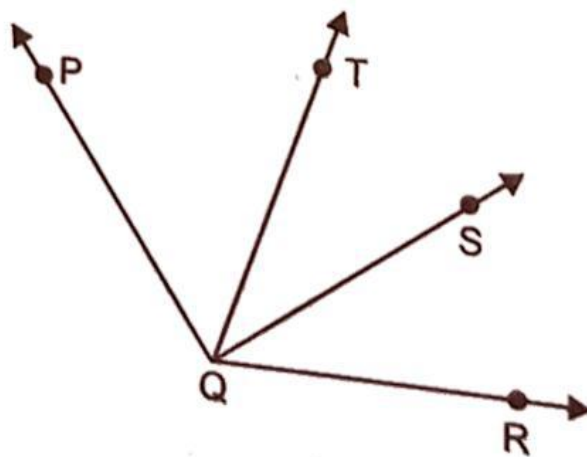17. In the given figure, PQ is an incident ray and QR reflected ray. If ∠PQR = 130°, find ∠RQB.

18. In the given figure, ray QS bisects ∠PQR. T is a point in the interior of ∠PQS. Prove that $\angle TQS = \frac{1}{2}(m\angle TQR - m\angle PQT)$.

Answers

1. $x = 31°$; $158°$, $22°$ 2. $216°$ 3. $x = 20°$

4. $x = 50°$ 5. $x = 16°$ 6. $\angle COD = 110°$

7. $\angle BOC = 47°$; $\angle COD = 44°$; $\angle DOA = 89°$

8. $x = 36°$; $\angle AOC = 72°$, $\angle COD = 72°$ and $\angle BOD = 36°$

9. $120°$ 10. $x = 40°$

11. $30°$ 12. $x = 25°$ 13. $x = 20°$, $y = 160°$, $z = 90°$, $u = 70°$

15. $\angle AOD = \angle AOC = 115°$

16. $\angle BOC = 36°$, $\angle COD = 54°$ and $\angle DOA = 90°$ 17. $25°$