MATHS
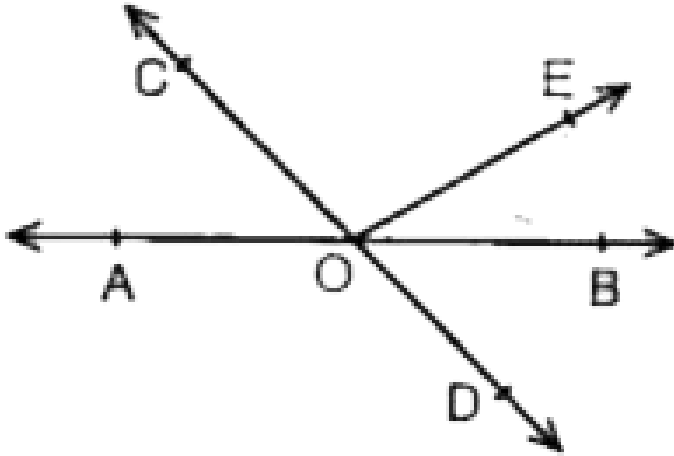
BOOKS - NAND LAL PUBLICATION

LINES AND ANGLES

Exercise 6 1

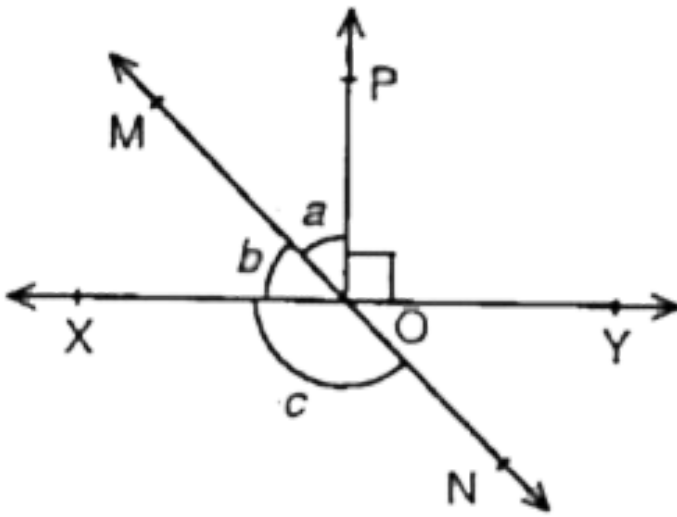**1.** In figure, lines AB and CD intersect at O. If $\angle AOC + \angle BOE = 70°$ and $\angle BOD = 40°$, find
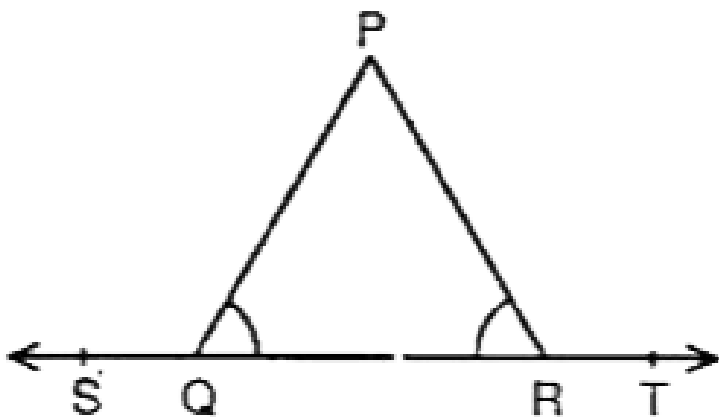
$\angle BOE$ and reflex $\angle COE$.

2. In figure, lines XY and MN intersect at O. If $\angle POY = 90°$ and $a : b = 2 : 3$, find c.

3. In figure, $\angle PQR = \angle PRQ$, then prove that $\angle PQS = \angle PRT$.

4. In figure, if $x + y = w + z$, then prove that AOB is a line.
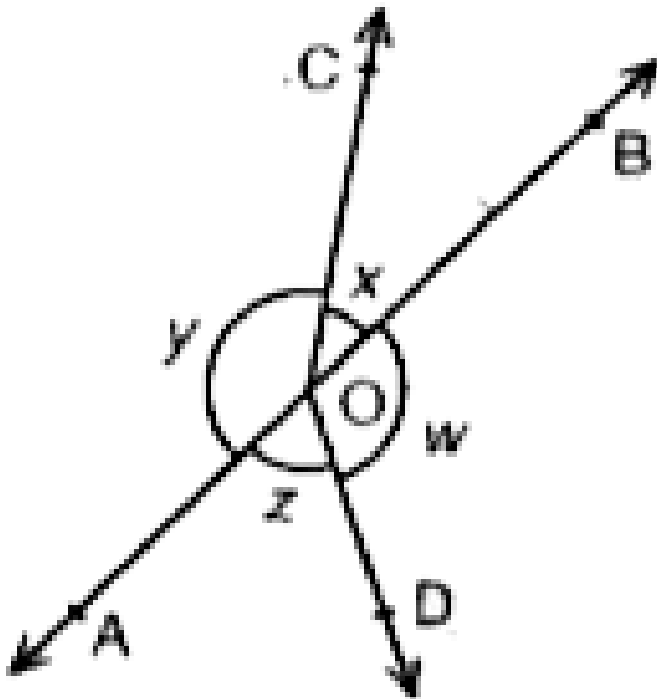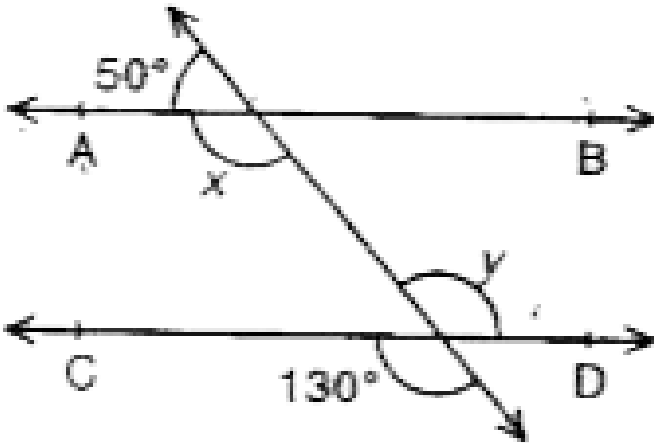
5. It is given that $\angle XYZ = 64°$ and XY is produced to point P. Draw a figure from the given information. If ray YQ bisects $\angle ZYP$, find $\angle XYQ$ and reflex $\angle QYP$.
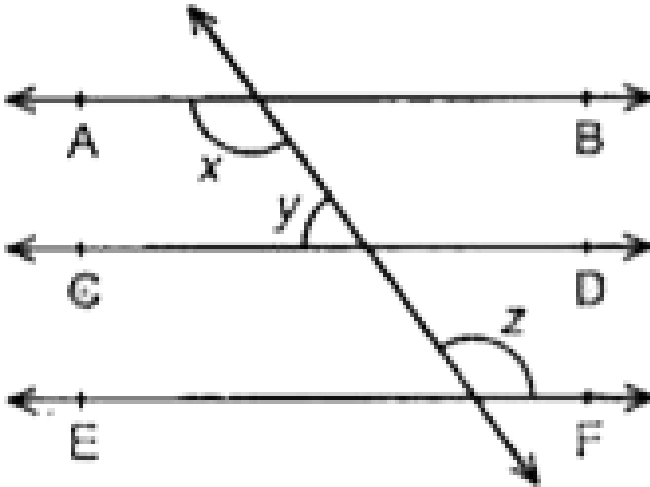
Exercise 6 2

1. In figure, find the values of x and y and then show that

AB || CD.

Exercise 6 3

1. In figure, if $AB||CD$, $CD||EF$ and $y:z = 3:7$, find x.

    ▶ Watch Video Solution

2. In figure, sides QP and RQ of $\triangle PQR$ are produced to points S and T respectively. If $\angle SPR = 135°$ and

$\angle PQT = 110°$, find $\angle PRQ$.
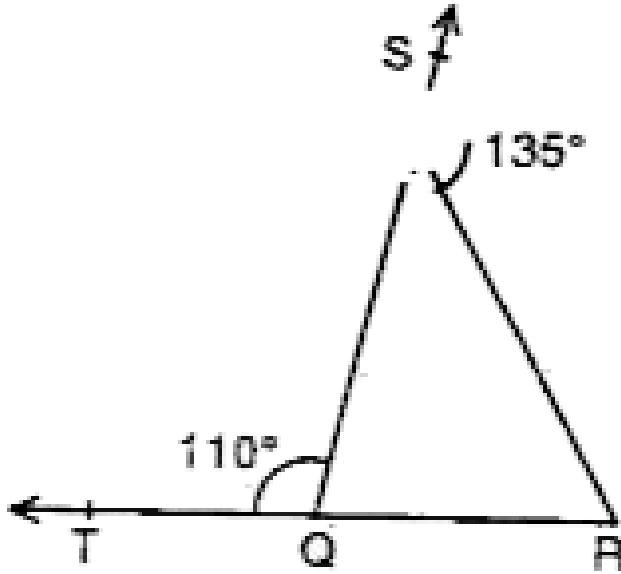
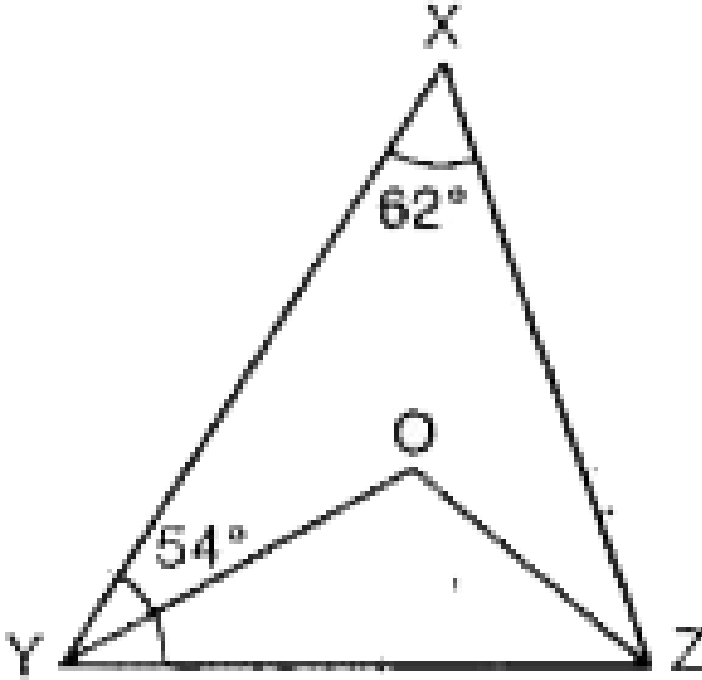**3.** In figure, $\angle X = 62°$, $\angle XYZ = 54°$, If YO and ZO are the bisectors of $\angle XYZ$ and $\angle XZY$ respectively of

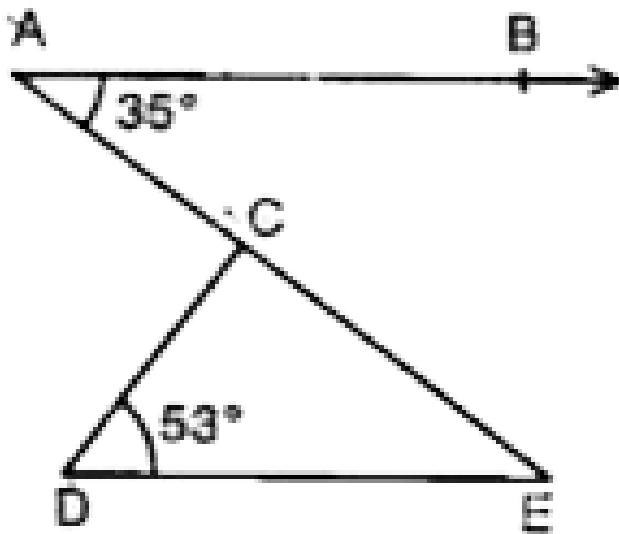$\triangle XYZ$, find $\angle OZY$ and $\angle YOZ$.

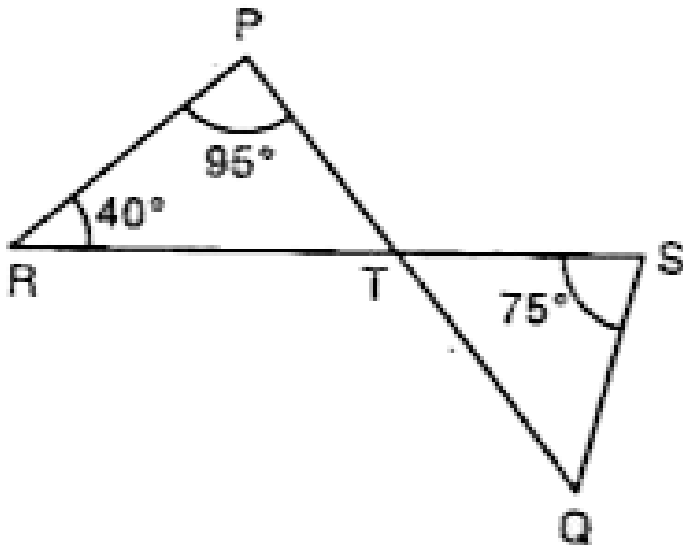**4.** In figure, if $AB \mid\mid DE, \angle BAC = 35°$ and $\angle CDE = 53°$, find $\angle DCE$.

5. In figure, if lines PQ and RS intersect at point T, such that $\angle PRT = 40°$, $\angle RPT = 95°$ and. $\angle TSQ = 75°$,

find $\angle SQT$.

6. In figure, if
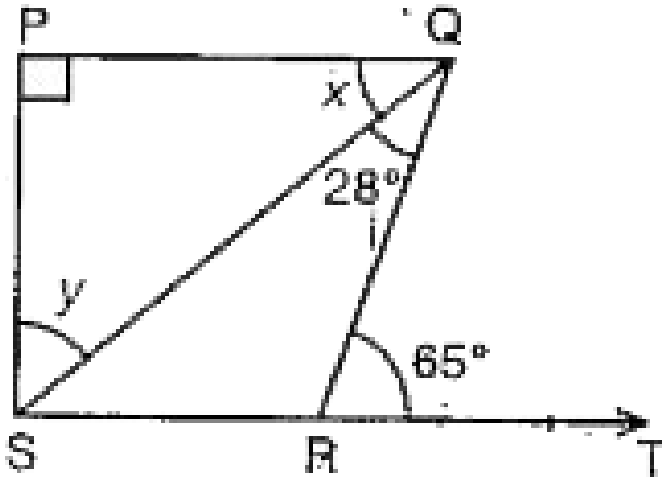$PQ_I - PS, PR \mid \mid SR, \angle SQR = 28°$ and $\angle QRT = 65°$
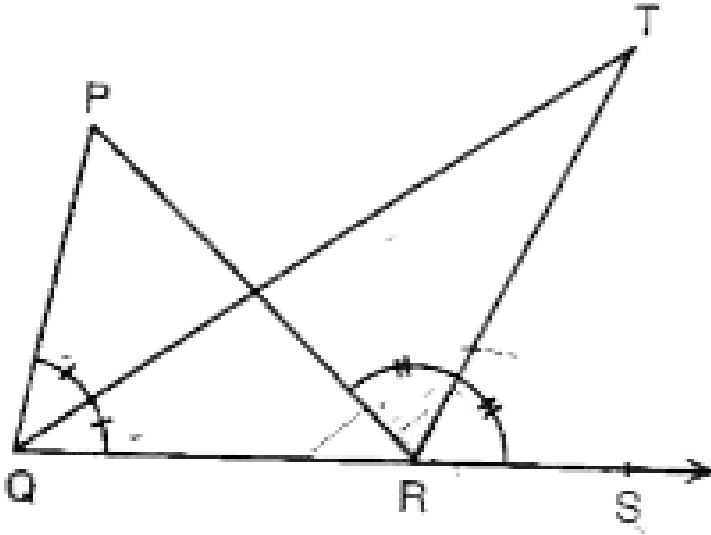
, then find the values of x and y.

7. In figure, the side QR of $\triangle PQR$ is produced to a point S. If the bisectors. of $\angle PQR$ and $\angle PRS$ meet at point
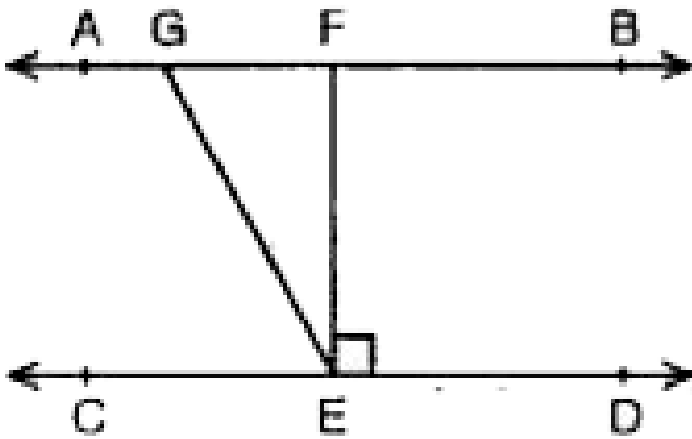
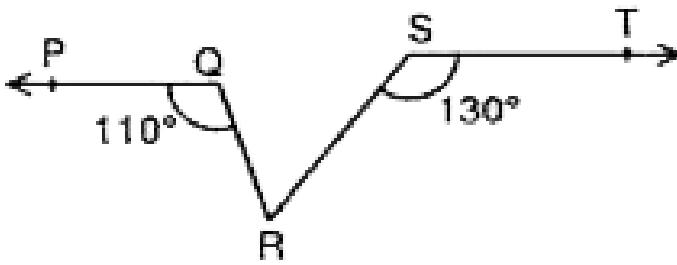T, then prove that $\angle QTR = \dfrac{1}{2}\angle QPR.$

Exercise 6 4

1. In figure, if $AB \mid\mid CD, EF_I \perp CD$ and $\angle GED = 126°$, find $\angle AGE, \angle GEF$ and $\angle FGE.$

Exercise 6 5

1. In figure, if $PQ \mid \mid ST, \angle PQR = 110°$ and $\angle RST = 130°$, find $\angle QRS$.

Exercise 6 6

1. In figure, if $AB \mid\mid CD, \angle APR = 50°$ and $\angle PRD = 127°,$ find

x and y.