



## MATHS

BOOKS - VIDHYASANGAM - RAO'S ACADEMY

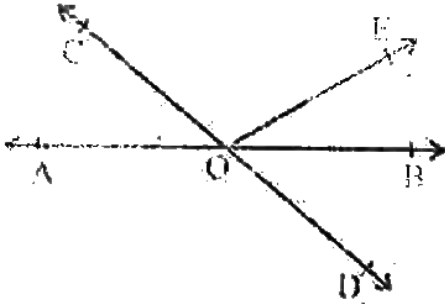
MATHS (KANNADA ENGLISH)

### LINES AND ANGLES

#### Exercise 3 1

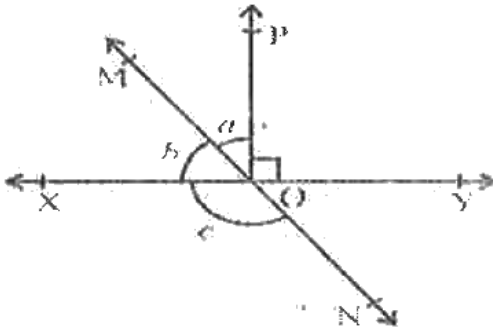
1. In Fig , lines AB and CD intersect at O. If  $\angle AOC + \angle BOE = 70^\circ$  and  $\angle BOD = 40^\circ$  , find

$\angle BOE$  and reflex  $\angle COE$ .



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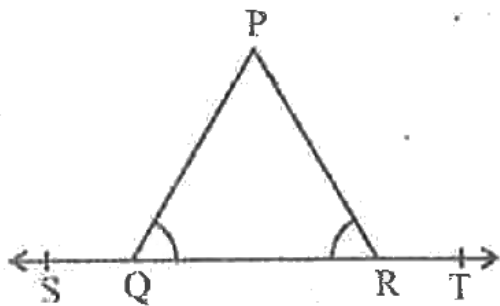
2. In Fig , lines XY and MN intersect at O. If  $\angle POY = 90^\circ$  and  $a : b = 2 : 3$  , find c.



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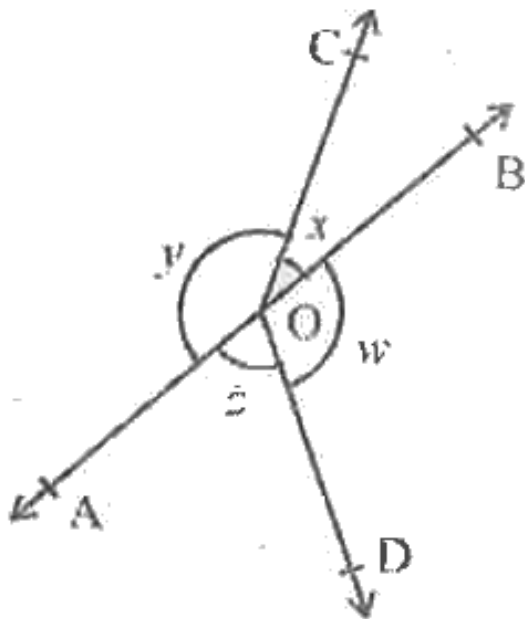
3. In Figure  $\angle PQR = \angle PRQ$  , then prove that

$$\angle PQS = \angle PRT$$



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4. In Fig , if  $x + y = w + z$  , then prove that AOB is a line .

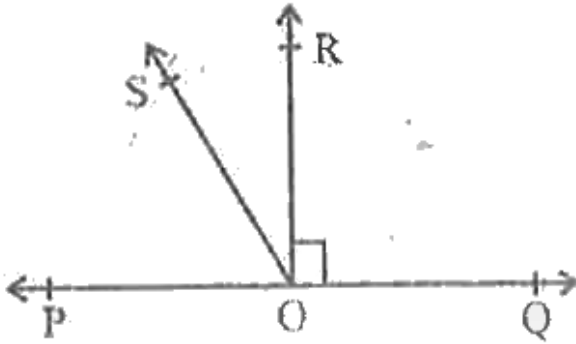


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5. In Figure , POQ is a line. Ray OR is perpendicular to line PQ.

OS is another ray lying between rays OP and OR. Prove that

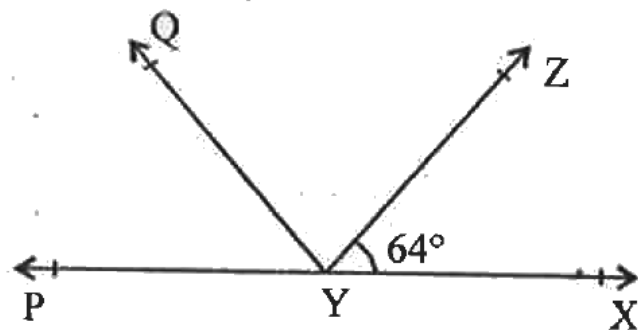
$$\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$$



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6. It is given that  $\angle XYZ = 64^\circ$  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  $\angle QYP$ .

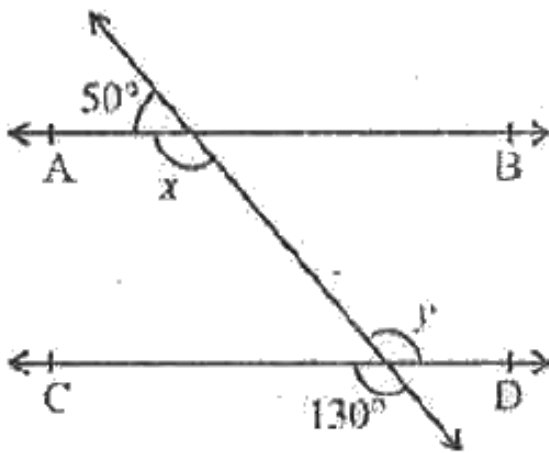


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## Exercise 3 2

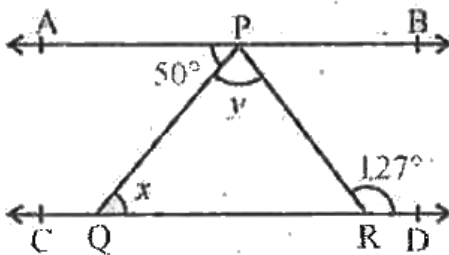
1. In the Figure find the values of  $x$  and  $y$  and then show that

$AB \parallel CD$ .



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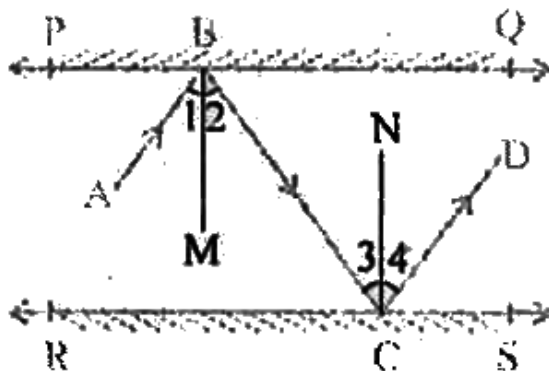
2. In Figure if  $AB \parallel CD$ ,  $\angle APQ = 50^\circ$  and  $\angle PRD = 127^\circ$  find  $x$  and  $y$ .



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3. In the given Figure , PQ and RS are two mirrors placed parallel to each other . An incident ray AB strikes the mirror PQ at B, the reflected ray moves along the path BC and strikes the mirror RS at C and again reflects back along CD.

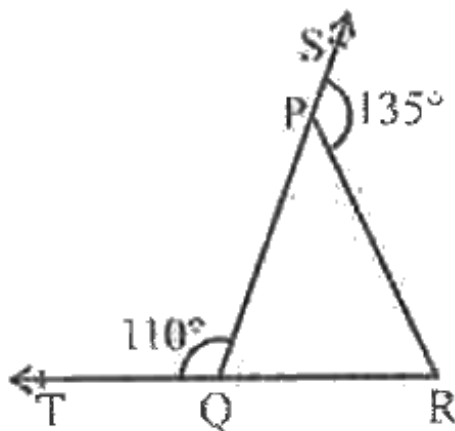
Prove that  $AB \parallel CD$ .



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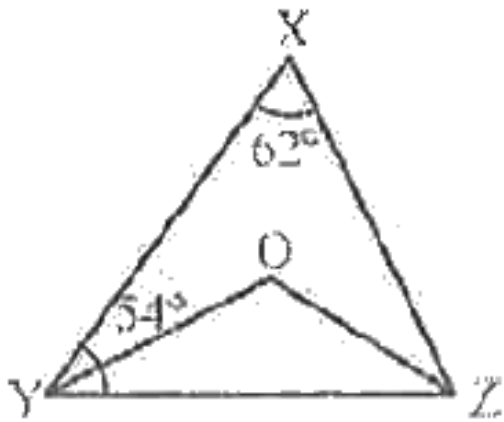
1. In Fig , sides QP and RQ of  $\triangle PQR$  are produced to points S and T respectively . If  $\angle SRP = 135^\circ$  and  $\angle PQT = 110^\circ$ , find  $\angle PRO$ .



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2. In the Figure  $\angle X = 62^\circ$ ,  $\angle XYZ = 54^\circ$ . If YO and ZO are the bisectors of  $\angle XYZ$  and  $\angle XZY$  respectively of

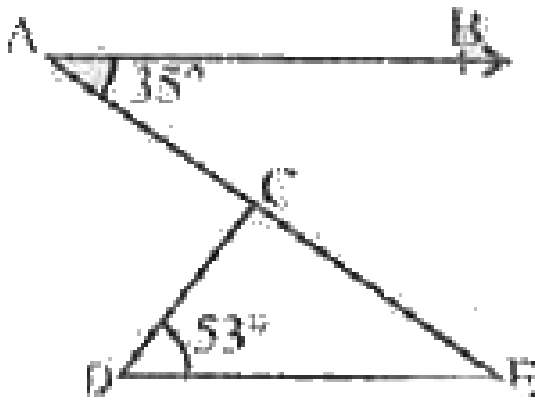
$\triangle XYZ$ , find  $\angle OZY$  and  $\angle YOZ$ .



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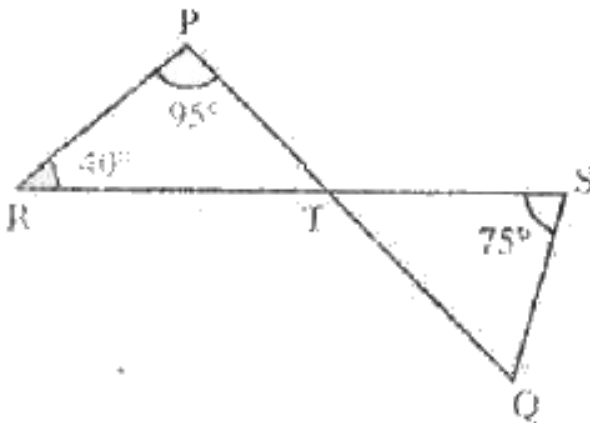
3. In the Fig , if

$AB \parallel DE$ ,  $\angle BAC = 35^\circ$  and  $\angle CDE = 53^\circ$ , find  $\angle DCE$ .



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4. In Fig , if lines PQ and RS intersect at point T, such that  $\angle PRT = 40^\circ$ ,  $\angle RPT = 95^\circ$  and  $\angle TSQ = 75^\circ$ , find  $\angle SQT$ .



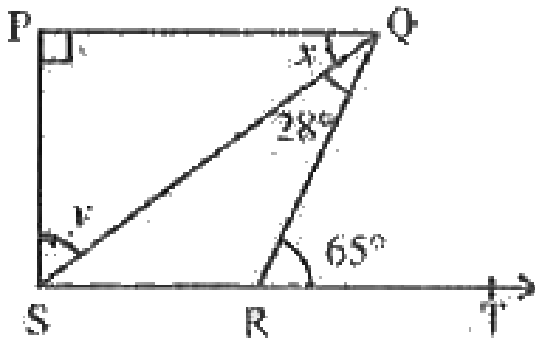


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5. In the Fig , if

$PQ \perp PS$ ,  $PQ \parallel SR$ ,  $\angle SQR = 28^\circ$  and  $\angle QRT = 65^\circ$

,then find the values of x and y.



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6. In Fig , the side QR and  $\triangle PQR$  is produced to a point S. If the bisector of  $\angle PQR$  and  $\angle PRS$  meet at point T the prove

that  $\left[ Q^T R = \frac{1}{2} \right] Q P R.$



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