MATHS

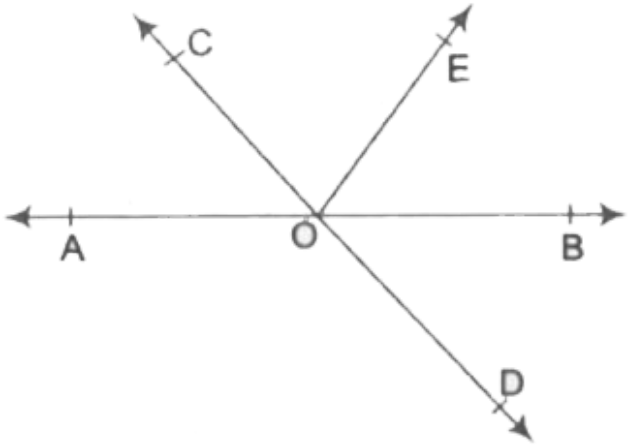
BOOKS - CAMBRIDGE MATHS (KANNADA ENGLISH)

LINES AND ANGLES

Exercise 3 1

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

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



A.

B.

C.

D.

Answer: 250°

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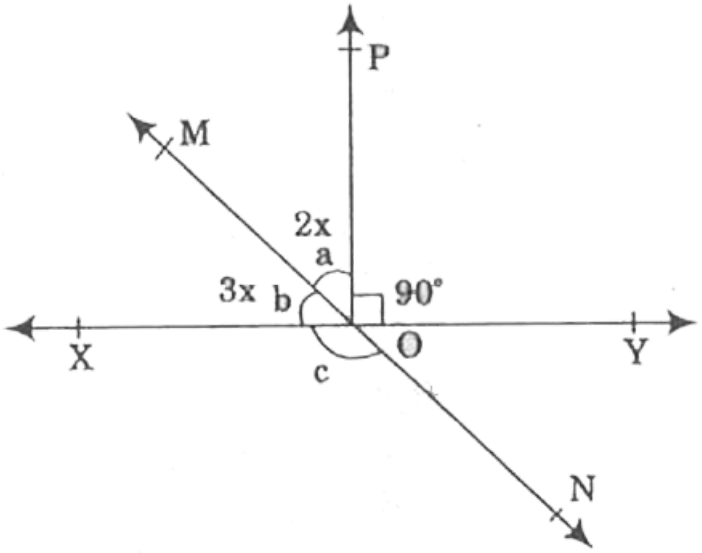
2. In the given figure, lines XY and MN intersect at O. If $\angle POY = 90^\circ$ and $a : b = 2 : 3$, find c.



A.

B.

C.

D.

Answer: $\angle XON = \angle MOY = 126^\circ$

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

A.

B.

C.

D.

Answer:

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4. In Figure, if $x + y = 2 + z$, then prove that AOB is a line Fig.

A.

B.

C.

D.

Answer:

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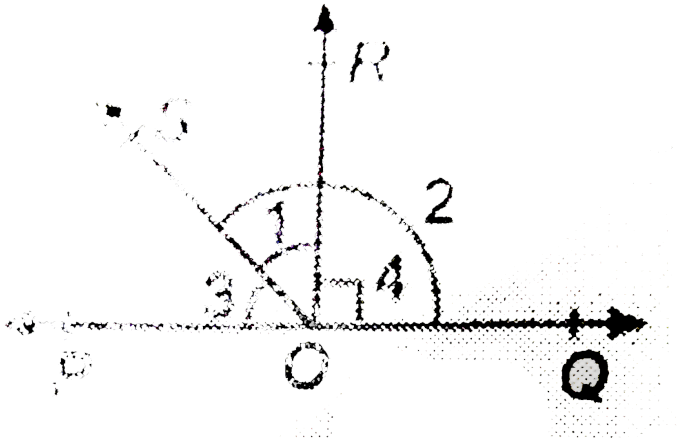
5. In figure POQ is a line. Raw Oris perpendicular to line PQ .OS is another ray lying between rays OP and OR. Prove that $\angle ROS\frac{1}{2}(\angle QOS - \angle POS) i.e., \angle 1 = \frac{1}{2}(\angle 2 - \angle 3)$



A.

B.

C.

D.

Answer:

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6. It is given that $\angle XYZ = 64o$and XY is produced to point P. Draw a figure from the given information. If ray YQ bisects $\angle ZYP$, find $\angle XYQ$ and $reflex\angle QYP$.

A.

B.

C.

D.

Answer: 122°

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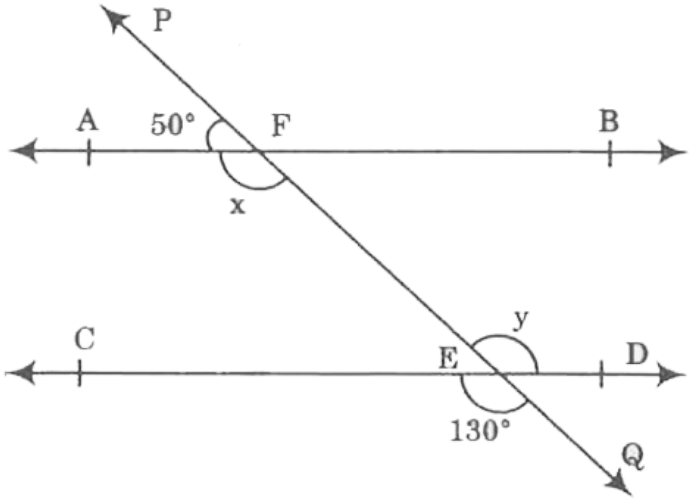
Exercise 3 2

1. In the given figure, find the values of x and y and then show that $AB||CD$.



A.

B.

C.

D.

Answer:

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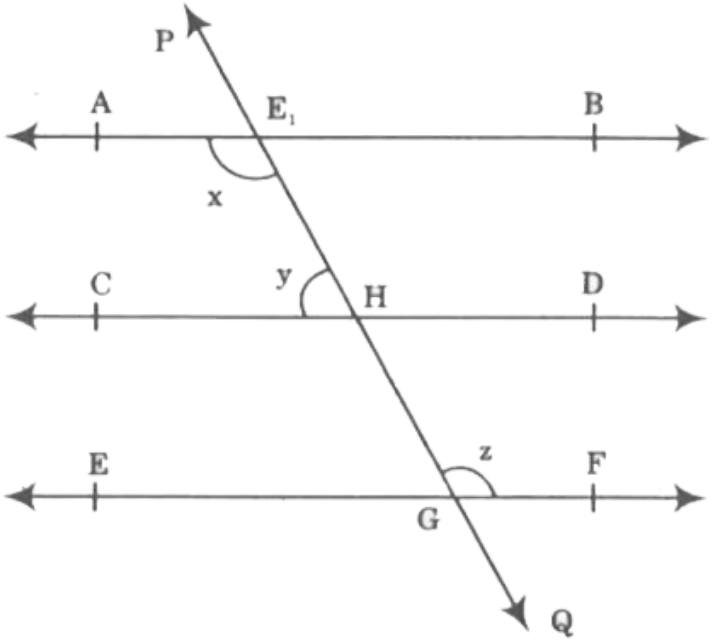
2. In figure, if $AB||CD$, $CD||EF$ and $y:z=3:7$, find x.



A.

B.

C.

D.

Answer: $\angle y = 3a = 3 \times 18 = 54^\circ$

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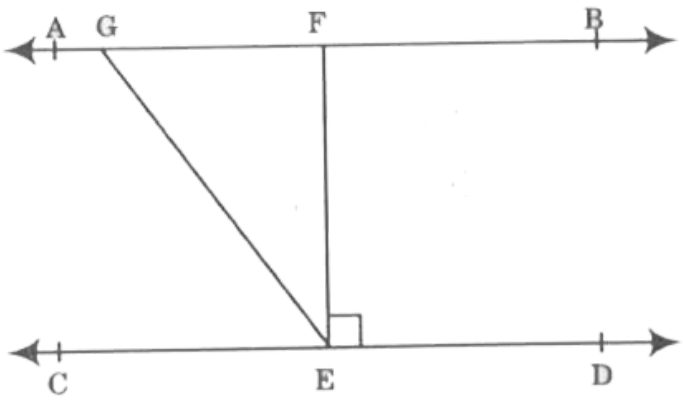
3. In the given figure, if $AB||CD$, $EF \perp CD$ and $\angle GED = 126^\circ$, find $\angle AGE$, $\angle GEF$ and $\angle FGE$.



A.

B.

C.

D.

Answer:

$\angle AGE = 126^\circ, \angle GEF = 36^\circ, \angle FGE = 54^\circ$

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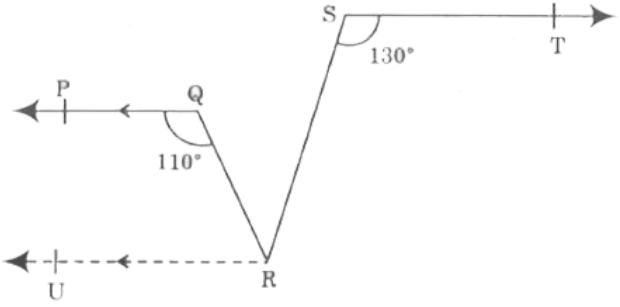
4. In the given figure if $PQ||ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$, find $\angle QRS$.



:

A.

B.

C.

D.

Answer: $\therefore \angle QRS = 60^\circ$

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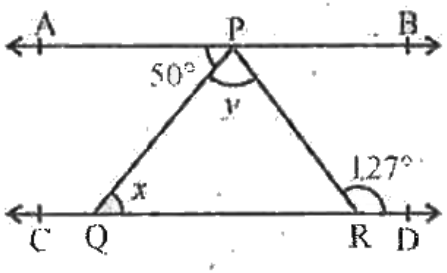
5. In Figure if $AB \| CD, \angle APQ = 50^\circ$ and $\angle PRD = 127^\circ$ find x and y .



A.

B.

C.

D.

Answer: $\angle PQR = 50^\circ, \angle QPR = 77^\circ$

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6. In 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 and C and again reflects back along CD. Prove that $AB \mid\mid CD$.

A.

B.

C.

D.

Answer:

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Exercise 3 3

1. In figure, sides QP and RQ of PQR are produced to point S and T respectively. If $\angle SPR = 135^0$ and $\angle PQT = 110^0$, find $\angle PRQ$.

Figure

A.

B.

C.

D.

Answer: $\angle QRP = 65^\circ$

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2. In Figure, $\angle X = 62^0, \angle XYZ = 54^0.$ If $YO \; and \; ZO$ are bisectors of $\angle XYZ \; and \; \angle XZY$ respectively of $XYZ,$ find $\angle OZY \; and \; \angle YOZ$

A.

B.

C.

D.

Answer: $\therefore \angle OZY = 32^\circ$ **and** $\angle YOZ = 121^\circ$

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3. In the given figure, if $AB||DE, \angle BAC = 35^\circ$ and $\angle CDE = 53^\circ$, find $\angle DCE$.

A.

B.

C.

D.

Answer: $\angle DCE = 180^\circ - 88^\circ = 92^\circ$

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4. In given figure, 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 $\angle SQT$

A.

B.

C.

D.

Answer: $\angle TQS = 60^\circ$

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5. In the given figure, if $PQ \perp PS, PQ||SR, \angle SQR = 28^\circ$ and $\angle QRT = 65^\circ$, then find the values of x and y.

A.

B.

C.

D.

Answer: 53°

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6. In Fig. 6.44, the side QR of PQR is produced to a point S. If the bisectors of $\angle PQR\ and \angle PRS$ meet at point T, then prove that $\angle QTR = \frac{1}{2}\angle QPR$.

A.

B.

C.

D.

Answer:

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