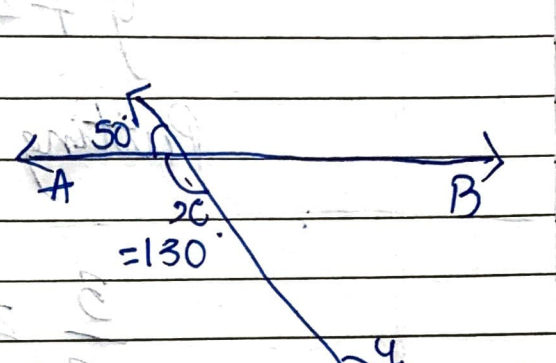
Ex - 6.2

1) Now,

$50 + x = 180$

$x = 180 - 50$

$x = 130$



Also,

$Y = 130$

$\therefore x = y$

So, alternate angles are equal.

2) It is given that

$\frac{y}{2} = \frac{3}{7}$

$y = \frac{3}{7} 2$

Let $\angle CON = P$

Now CD // EF

So $p = 7$ (Alternate interior angle

Also,

$y + P = 180$ (linear pair)

$y + 2 = 180$ (From 1)

$y + 2 = 180$

Putting $y = \frac{3}{7}z$

$\frac{3}{7}z + z = 180$

$\frac{3z + 7z}{7} = 180$

$z = \frac{7}{10} \quad \frac{10z}{7} = 180$

$z = \frac{7}{10} \times 180$

$z = 126$

Now

$y = \frac{3}{7}z$

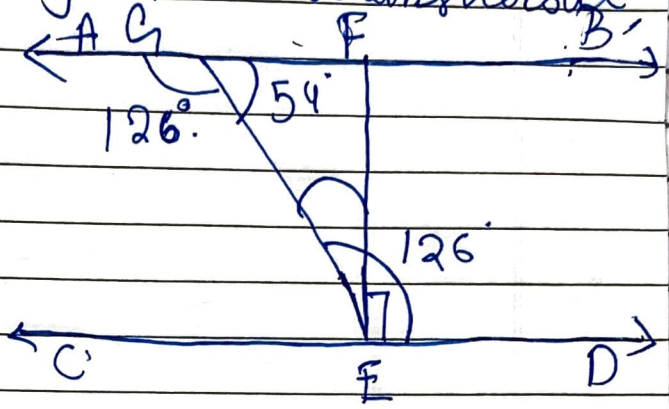
Putting $z = 126$

$y = \frac{3}{7} \times 126$

$y = 54$

3.) Now,

AB || CD & GE is transversal



Hence,

$\angle AGE = \angle GED$

$\angle AGE = 126°$

Now,

Since AB is a line

$\angle AGE + \angle FGE = 180°$

$126 + \angle FGE = 180°$

$\angle FGE = 180° - 126°$

$\angle FGE = 54°$

Now,

$\angle GEF = \angle GED - \angle FED$

$\angle GEF = 126 - 90°$

$\angle FGE = 36°$

$\therefore \angle AGE = 126°, \angle GEF = 36°, \angle FGE = 5$

Ex 6.2

4) It is given that PQ // ST

We draw a line xy // ST

So, xx // PQ, ie. PQ // ST // xy

Since PQ // xy & QR is the transversal

So, $\angle PQR + \angle QRK = 180°$

$110° + \angle QRK = 180°$

$\angle QRK = 180° - 110°$

$\angle QRK = 70°$

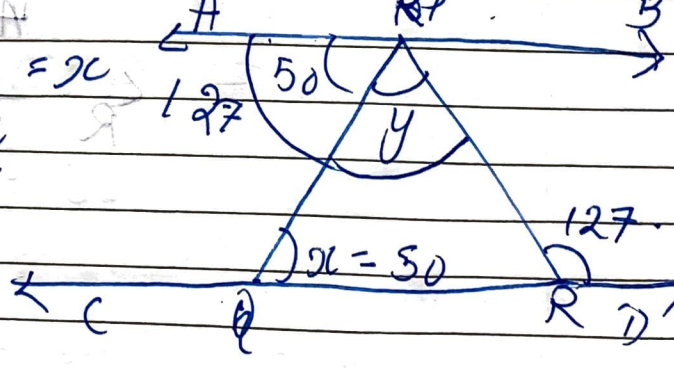
5) Now, AB // CD

and PQ is the transversal

Hence, $\angle APQ = x$

$50° = x$

$x = 50°$



Similarly

AB // CD

and PR is the transversal

Hence $\angle APR = \angle PRD$.

$\angle APR = \angle PRD$

$50 + y = 127$

$y = 127 - 50$

$y = 77$

Hence, $x = 50$ and $y = 77$

6) Here AB is incident ray and BC is reflected ray

From law of reflection

$\angle 1 = \angle 2$

$\angle 3 = \angle 4$