



Exercise 4C

Question 5:

Since $AB \parallel CD$ and BC is a transversal.

So, $\angle ABC = \angle BCD$ [alternate interior angles]

$$\Rightarrow 70^\circ = x^\circ + \angle ECD \dots (i)$$

Now, $CD \parallel EF$ and CE is transversal.

So, $\angle ECD + \angle CEF = 180^\circ$ [sum of consecutive interior angles is 180°]

$$\therefore \angle ECD + 130^\circ = 180^\circ$$

$$\Rightarrow \angle ECD = 180^\circ - 130^\circ = 50^\circ$$

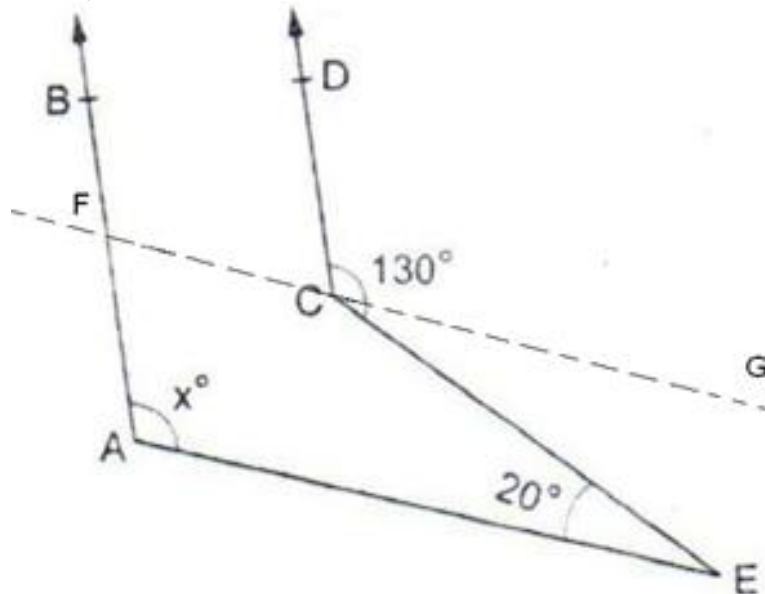
Putting $\angle ECD = 50^\circ$ in (i) we get,

$$70^\circ = x^\circ + 50^\circ$$

$$\Rightarrow x = 70 - 50 = 20$$

Question 6:

Through C draw $FG \parallel AE$



Now, since $CG \parallel BE$ and CE is a transversal.

So, $\angle GCE = \angle CEA = 20^\circ$ [Alternate angles]

$$\therefore \angle DCG = 130^\circ - \angle GCE$$

$$= 130^\circ - 20^\circ = 110^\circ$$

Also, we have $AB \parallel CD$ and FG is a transversal.

So, $\angle BFC = \angle DCG = 110^\circ$ [Corresponding angles]

As, $FG \parallel AE$, AF is a transversal.

$\angle BFG = \angle FAE$ [Corresponding angles]

$$\therefore x^\circ = \angle FAE = 110^\circ.$$

Hence, $x = 110$

***** END *****