



#### 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  $180^\circ$ ]

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

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

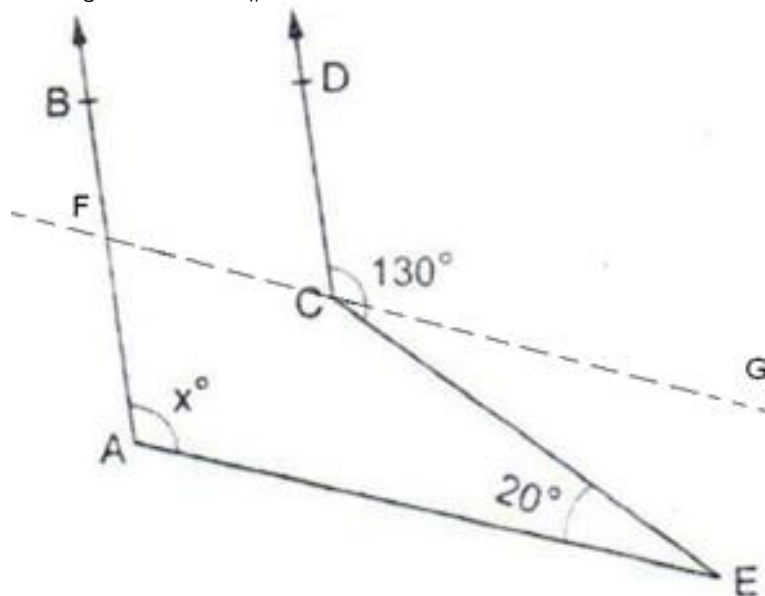
Putting  $\angle ECD = 50^\circ$  in (i) we get,

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

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

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 \*\*\*\*\*