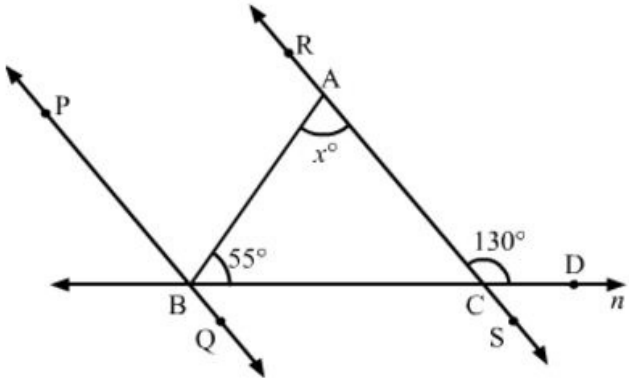
Lines and angles Ex 14.2 Q26

Answer :



$\angle RCD + \angle RCB = 180^\circ$ (Linear pair)

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

In $\triangle ABC$,

$\angle BAC + \angle ABC + \angle BCA = 180^\circ$ (Angle sum property)

$\Rightarrow \angle BAC = 180^\circ - 55^\circ - 50^\circ = 75^\circ$

Lines and angles Ex 14.2 Q27

Answer :

$\angle BAC = \angle ACG = 120^\circ$ (Alternate interior angle)

$\therefore \angle ACF + \angle FCG = 120^\circ$

$\Rightarrow \angle ACF = 120^\circ - 90^\circ = 30^\circ$

$\angle DCA + \angle ACG = 180^\circ$ (Linear pair)

$\Rightarrow \angle x = 180^\circ - 120^\circ = 60^\circ$

$\angle BAC + \angle BAE + \angle EAC = 360^\circ$

$\angle CAE = 360^\circ - 120^\circ - (60^\circ + 30^\circ) = 150^\circ$ ($\angle BAE = \angle DCF$)

Lines and angles Ex 14.2 Q28

Answer :

(i) Since AC || BD and CD || AB, ABCD is a parallelogram.
$\angle CAB + \angle ACD = 180°$ (Sum of adjacent angles of a parallelogram)
$\therefore \angle ACD = 180° - 65° = 115°$
$\angle CAD = \angle CDB = 65°$ (Opposite angles of a parallelogram)
$\angle ACD = \angle DBA = 115°$ (Opposite angles of a parallelogram)

(ii) Here,
AC || BD and CD || AB
$\angle DAC = x = 40°$ (Alternate interior angle)
$\angle DAB = y = 35°$ (Alternate interior angle)

********** END **********