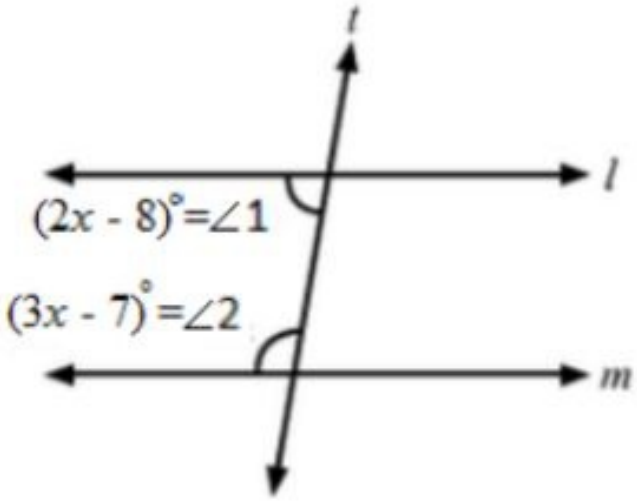
Exercise 14A

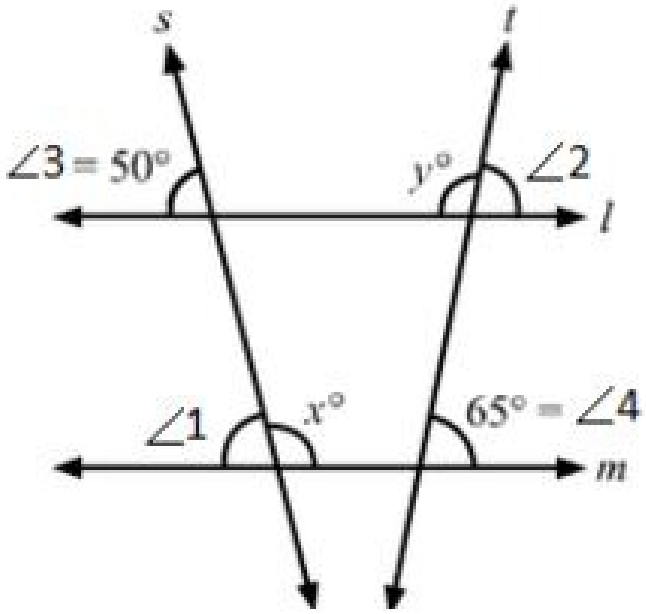


Q4

Answer :

From the given figure:

$\angle 1 = \angle 3 = 50^\circ$ (corresponding angles)
and $\angle 1 + x^\circ = 180^\circ$ (linear pair)
or $x^\circ = 180^\circ - 50^\circ = 130^\circ$
or $x = 130$
$\angle 2 = \angle 4 = 65^\circ$ (corresponding angles)
and $\angle 2 + y^\circ = 180^\circ$ (linear pair)
or $y^\circ = 180^\circ - 65^\circ = 115^\circ$
or $y = 115$



Q5

Answer :

Given :

$\angle B = 65^\circ$

$\angle C = 45^\circ$

DAE ∥ BC

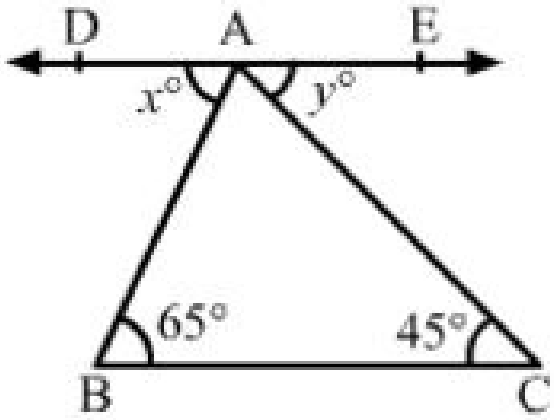
The given lines are parallel.

$\therefore x^\circ = \angle B = 65^\circ$ (alternate angles when AB is taken as the transversal)

$y^\circ = \angle C = 45^\circ$ (alternate angles when AC is taken as the transversal)

$\therefore x = 65$

$y = 45$



Q6

Answer :

Given : CE ∥ BA

$\angle BAC = 80^\circ, \angle ECD = 35^\circ$

(i) $\angle BAC = \angle ACE = 80^\circ$ (alternate angles with AC as a transversal)

(ii) $\angle ACB + \angle ACD = 180^\circ$ (linear pair)

or $\angle ACB + \angle ACE + \angle ECD = 180^\circ$

or $\angle ACB + 80^\circ + 35^\circ = 180^\circ$

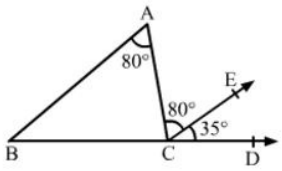
or $\angle ACB = 65^\circ$

(iii) In $\triangle ABC$:

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

$80^\circ + 65^\circ + \angle ABC = 180^\circ$

$\angle ABC = 35^\circ$



Q7

Answer :

Given : AO ∥ CD

OB ∥ CE

$\angle AOB = 50^\circ$

$\angle AOD = \angle CDB = 50^\circ$ (when AO ∥ CD and OB is the transversal)

$\angle ECD + \angle CDB = 180^\circ$ (consecutive interior angles are supplementary, DB ∥ CE and *CD* is *the* transversal)

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

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