Lines and angles Ex 14.2 Q23

Answer :

$\angle BDE = \angle ABD = 32^\circ$ (Alternate interior angles)

$\Rightarrow \angle BDE + y = 180^\circ$ (Linear pair)

$\Rightarrow 32^\circ + y = 180^\circ$

$\Rightarrow y = 180^\circ - 32^\circ = 148^\circ$

$\angle ABE = \angle E = 122^\circ$ (Alternate interior angle)

$\angle ABD + \angle DBE = 122^\circ$

$32^\circ + x = 122^\circ$

$x = 122^\circ - 32^\circ = 90^\circ$

Lines and angles Ex 14.2 Q24

Answer :

$\angle ABC = \angle ECD = 55^\circ$ (Corresponding angles)

$\angle BAC = \angle ACE = 65^\circ$ (Alternate interior angles)

Now, $\angle ACD = \angle ACE + \angle ECD$

$\Rightarrow \angle ACD = 55^\circ + 65^\circ = 120^\circ$

Lines and angles Ex 14.2 Q25

Answer :

Since CA $\perp$ AB,

$\therefore \angle x = 90^\circ$

We know that the sum of all the angles of triangle is 180°.

In $\triangle APQ$,

$\angle QAP + \angle APQ + \angle PQA = 180^\circ$

$\Rightarrow 90^\circ + \angle APQ + 20^\circ = 180^\circ$

$\Rightarrow 110^\circ + \angle APQ = 180^\circ$

$\Rightarrow \angle APQ = 180^\circ - 110^\circ = 70^\circ$

$\angle PBC = \angle APQ = 70^\circ$ (Corresponding angles)

Since $\angle PRC + \angle z = 180^\circ$ (Linear pair)

$\therefore \angle z = 180^\circ - 70^\circ = 110^\circ$ [$\angle APQ = \angle PRC$ (Alternate interior angles)]

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