Question 3: Hard

Evaluate the interior angle which is opposite to side c.

Answer:

$95ᶿ$ = C

Working:

Firstly we write the Cosine Law.

$c^{2}$= $a^{2}$+$b^{2}$ - 2.a.b.cos(C)

We then rearrange to equate C.
$cos^{-1}\left(\frac{c^{2}- a^{2 }- b^{2}}{- 2.a.b}\right)$ = C

Then we input our variables:

Where, a=12m, b=8m and c=15m

Therefore:
$cos^{-1}\left(\frac{15m^{2}- 12m^{2 }- 8m^{2}}{- 2.12m.8m}\right)$ = C

$95ᶿ$ = C