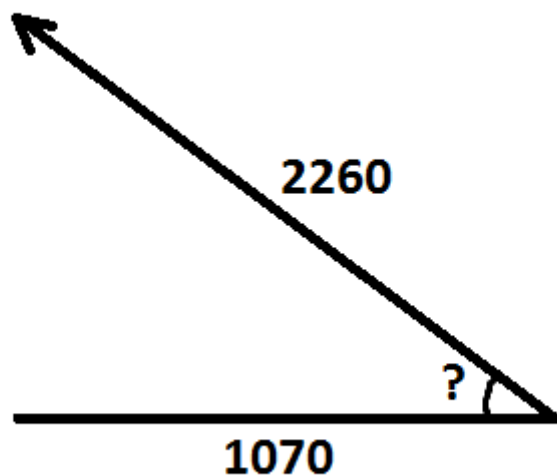61.74°

Question

If an airplane travels a path length of $2260\ m$ while traveling a horizontal distance of $1070\ m$, what is its angle of climb?

Solution

From trigonometry we have relation $\cos(\theta) = \dfrac{1070\ \text{(cathetus)}}{2260\ \text{(hypotenuse)}} = \dfrac{107}{226}$

Therefore, we can deduce angle: $\theta = \text{acos}\left(\dfrac{107}{226}\right) \approx 61.74°$