Related Questions with Solutions

Questions

Quetion: 01

If $\sin \alpha = A \sin(\alpha + \beta), A \neq 0$

The value of $\tan \alpha$ is

A. $\dfrac{A \sin \beta}{1 - A \cos \beta}$

B. $\dfrac{A \sin \beta}{1 + A \cos \beta}$

C. $\dfrac{A \cos \beta}{1 - A \sin \beta}$

D. $\dfrac{A \cos \beta}{1 + A \cos \beta}$

Solutions

Solution: 01

$\sin \alpha = A \sin(\alpha + \beta) = A(\sin \alpha \cos \beta + \sin \beta \cos \alpha)$

$\Rightarrow \sin \alpha(1 - A \cos \beta) = A \sin \beta \cos \alpha \quad \dots \text{ (i)}$

$\Rightarrow \tan \alpha = \dfrac{A \sin \beta}{(1 - A \cos \beta)}\dots\dots\dots\dots\text{[ii]}$

Correct Options

Answer:01

Correct Options: A