

Trigonometric Functions - Class XI

Related Questions with Solutions

Questions

Question: 01

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

The value of $\tan \beta$ is

- A. $\frac{\sin \alpha(1 + A \cos \beta)}{A \cos \alpha \cos \beta}$
B. $\frac{\sin \alpha(1 - A \cos \beta)}{A \cos \alpha \cos \beta}$
C. $\frac{\cos \alpha(1 - A \cos \beta)}{A \cos \alpha \cos \beta}$
D. $\frac{\cos \alpha(1 + A \sin \beta)}{A \cos \alpha \cos \beta}$

Solutions

Solution: 01

$$\begin{aligned}\tan \beta &= \frac{\sin \beta}{\cos \beta} = \frac{(1 - A \cos \beta) \tan \alpha}{A \cos \beta} \quad [\text{From [i]}] \\ &= \frac{(1 - A \cos \beta) \sin \alpha}{A \cos \alpha \cos \beta} \dots\dots\dots[\text{ii}]\end{aligned}$$

Correct Options

Answer:01

Correct Options: B