

Trigonometry Questions Overview

Trigonometry Questions have a good weightage in the Banking Exam and the type of question asked in Banking exam is similar to the question mentioned below. It has been solved and explained by Gargi.ai Experts and they have tried to elaborate the concept used in Trigonometry Questions.

Question

If $\tan 2A = \cot (A - 21^\circ)$, where $2A$ is an acute angle, find A .

Difficulty : Moderate

Average Time : 28 Seconds

Options :

1. 35°
2. 41°
3. 39°
4. 37°



Solution

The correct answer is **Option 4** i.e. 37°

Understanding/Application

$$\tan 2A = \cot (A - 21^\circ)$$

$$\tan 2A = \tan [90^\circ - (A - 21^\circ)] \quad [\text{since, } \tan(90^\circ -) = \cot]$$

$$\tan 2A = \tan [90^\circ - (A - 21^\circ)]$$

$$2A = [90^\circ - (A - 21^\circ)]$$

$$2A = [90^\circ - A + 21^\circ]$$

$$2A = [111^\circ - A]$$

$$2A + A = [111^\circ]$$

$$3A = [111^\circ]$$

$$A = 37^\circ$$

