Related Questions with Solutions

Questions

Quetion: 01

If $\log_x a$, $a^{\frac{x}{2}}$ and $\log_b x$ are in G.P., then x is equal to

A. $\log_a (\log_b a)$

B. $\log_a (\log_e a) - \log_a (\log_e b)$

C. $-\log_a (\log_a b)$

D. $\log_a (\log_e b) - \log_a (\log_e a)$

Solutions

Solution: 01

Since $\log_x a, a^{\frac{x}{2}}, \log_b x$ are in G.P.

$\therefore \quad a^x = \log_x a \cdot \log_b x = \log_b a$

$\therefore \quad x = \log_a (\log_b a) = \log_a \left(\dfrac{\log_e a}{\log_e b} \right)$

$= \log_a [\log_e a] - \log_a [\log_e b]$

Correct Options

Answer:01

Correct Options: A, B