49. $(\mathbf{aA})^{-1} = \dfrac{1}{\mathbf{a}} \ \mathbf{A}^{-1}$, **where a is any real number and A is a square matrix.**

Ans: Since, we know that, if A is a non- singular square matrix, then for any scalar a *non-zero*, aA is invertible such that

$\Rightarrow (aA) = \left(\dfrac{1}{a} A^{-1} \right) = \left(a.\dfrac{1}{a} \ \right) \left(AA^{-1} \right)$ i.e., aA is inverse of $\left(\dfrac{1}{a} A^{-1} \right)$ or $(aA)^{-1} = \dfrac{1}{a} A^{-1}$, where a is any non -zero scalar false.

In the above statement, a is any real number. So, we can conclude that above statement is false.