Number of possible ordered sets of two $n \times n$ matrices A and B for which $AB - BA = I$:

Solution :

$$Tr.(AB - BA) = Tr.(I)$$

$$Tr.(AB) - Tr.(BA) = n$$

$$n = 0$$

$$Tr.(A \pm B) = Tr.(A) \pm Tr.(B)$$

$$Tr.(AB) = Tr.(BA)$$

A Infinite

B n^2

C $n!$

D zero

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