1.If matrix A = $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ -2 & 0 & 1 \end{bmatrix}$

- Which one is A^{-1}?

(A) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ -2 & 0 & 1 \end{bmatrix}$ (B) $\begin{bmatrix} 1 & -2 & 0 \\ 0 & 1 & 0 \\ -0 & 0 & 1 \end{bmatrix}$

(C) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 2 & 0 & 1 \end{bmatrix}$ (D) $\begin{bmatrix} 1 & 2 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

Answer:C

2.If matrix A = $\begin{bmatrix} 3 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 4 \end{bmatrix}$ then

A^{-4}_{22} = ?

- (a) 1/16 (b) -1/16

Answer:A

- (c) 16 (d)-16

3.Which one of the following matrix is not ref ?

(A) $\begin{bmatrix} 1 & 0 & 3 & 2 \\ 0 & 0 & 1 & 4 \end{bmatrix}$

(B) $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 1 & 3 \\ 0 & 0 & 1 \end{bmatrix}$

(C) $\begin{bmatrix} 0 & 0 & 1 & 4 & 3 \\ 0 & 0 & 0 & 1 & 0 \end{bmatrix}$

(D) $\begin{bmatrix} 0 & 0 \\ 0 & 0 \\ 0 & 0 \end{bmatrix}$

Answer:B

4.If the rref of an augmented matrix $\begin{bmatrix} 1 & -6 & 0 & 0 & 3 & -2 \\ 0 & 0 & 1 & 0 & 4 & 7 \\ 0 & 0 & 0 & 1 & 5 & 8 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$

then how many free variables in this linear system

(a)1
(b)2
(c)3
(d)4

Answer:B

Note :原本矩陣element打錯，A_{44}應該是0.（原本錯打成6）該題送分