QUIZ NUMBER FOUR FOR MTH 221 AT 1 PM

AYMAN BADAWI

Name———————, Id. Num.———————————-, Score $\frac{}{15}$

QUESTION 1. *Let* A *be a* 3×3 *matrix such that* A $\underline{2R_2+R_3\to R_3}$ D $\underline{-6R_2+R_3\to R_3}$ B. *Find two elementary matrices* K_1, K_2 *such that* $K_1K_2A=B$.

Find TWO elementary matrices J_1, J_2 *such that* $J_1J_2B=A$.

QUESTION 2. *Let* $A=\begin{bmatrix}-2 & 3 & 2\\ 2 & 2 & 2\\ -1 & -4 & 0\end{bmatrix}$ *and* $B=\begin{bmatrix}-2 & 3 & 11\\ 2 & 2 & 8\\ -1 & -4 & -12\end{bmatrix}$ *Find an elementary matrix* F *such that* $BF=A$

QUESTION 3. *Find the product of* $\begin{bmatrix}1 & 0\\ 5 & 1\end{bmatrix}\begin{bmatrix}1 & 0\\ -6 & 1\end{bmatrix}\begin{bmatrix}6 & -4\\ 2 & -6\end{bmatrix}$ *by using row operations ONLY.*

Department of Mathematics & Statistics, American University Of Sharjah, P.O. Box 26666, Sharjah, United Arab Emirates

E-mail address: abadawi@aus.edu, www.ayman-badawi.com