WebAssign
CH 2.1 (Homework)

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MA 265 Spring 2013, section 132, Spring 2013
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Current Score : 20 / 20 **Due :** Thursday, January 24 2013 11:40 PM EST

1. 5/5 points | Previous Answers KolmanLinAlg9 2.1.002.

Find a row echelon form of each of the given matrices. Record the row operations you perform, using the notation for elementary row operations.

(a) $A = \begin{bmatrix} -1 & 1 & -1 & 0 & 3 \\ -3 & 4 & 1 & 1 & 10 \\ 4 & -6 & -4 & -2 & -14 \end{bmatrix}$

1	0	5	1	-2
0	1	4	1	1
0	0	0	0	0

(b) $A = \begin{bmatrix} 3 & 2 & -2 \\ 1 & 1 & -1 \\ 3 & 3 & -2 \end{bmatrix}$

1	0	0
0	1	0
0	0	1

2. 5/5 points | Previous Answers KolmanLinAlg9 2.1.006.

Find the reduced row echelon form of each of the given matrices. Record the row operations you perform, using the notation for elementary row operations.

(a) $A = \begin{bmatrix} 3 & 2 & 4 \\ 1 & 1 & 2 \\ -3 & -3 & -5 \end{bmatrix}$

1	0	0
0	1	0
0	0	1

(b) $A = \begin{bmatrix} 3 & -1 & -5 \\ 7 & -3 & -1 \\ 5 & -1 & -2 \\ 5 & -10 & 8 \end{bmatrix}$

1	0	0
0	1	0
0	0	1
0	0	0

3. 5/5 points | Previous Answers KolmanLinAlg9 2.1.008.

Let x, y, z, and w be nonzero real numbers. Label each of the following matrices REF if it is in row echelon form, RREF if it is in reduced row echelon form, or N if it is not REF and not RREF.

(a) $\begin{bmatrix} 1 & x & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 \end{bmatrix}$

- ○ REF
- ◉ RREF
- ○ N

(b) $\begin{bmatrix} 0 & y & 0 \\ 1 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

- ○ REF
- ○ RREF
- ◉ N

(c) $\begin{bmatrix} 1 & 0 & x \\ 0 & 1 & y \\ 0 & 0 & 1 \end{bmatrix}$

- ◉ REF
- ○ RREF
- ○ N

4. 5/5 points | Previous Answers KolmanLinAlg9 2.1.012.

Let

$$A = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 \\ 2 & 1 & 3 & -1 & 2 \\ 3 & 1 & 2 & 4 & 1 \end{bmatrix}.$$

(a) Find a matrix in column echelon form that is column equivalent to A.

1	0	0	0	0
0	1	0	0	0
0	0	1	0	0

(b) Find a matrix in reduced column echelon form that is column equivalent to A.

1	0	0	0	0
0	1	0	0	0
0	0	1	0	0