

Show *all steps* done in class for full credit. No credit for the guess-and-check method of solution.

1. Pivot about the circled element.

(9 pts)

$$\begin{bmatrix} 2 & 1 & 8 & 3 \\ 6 & 0 & 9 & \textcircled{3} \\ -1 & 0 & 0 & 6 \end{bmatrix} \xrightarrow{\frac{1}{3}[2]} \begin{bmatrix} 2 & 1 & 8 & 3 \\ 2 & 0 & 3 & 1 \\ -1 & 0 & 0 & 6 \end{bmatrix} \xrightarrow{\begin{array}{l} [1] + (-3)[2] \\ [3] + (-6)[2] \end{array}} \begin{bmatrix} -4 & 1 & -1 & 0 \\ 2 & 0 & 3 & 1 \\ -13 & 0 & -18 & 0 \end{bmatrix}$$

2. Perform the multiplication (no work needed), or briefly explain why it cannot be done.

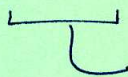
(7+7 pts)

a.  $\begin{bmatrix} -4 & 1 & 2 \\ 1 & 1 & 3 \end{bmatrix} \begin{bmatrix} 2 & -1 \\ 1 & 3 \\ 3 & -4 \end{bmatrix} = \begin{bmatrix} -8+1+6 & 4+3-8 \\ 2+1+9 & -1+3-12 \end{bmatrix} = \begin{bmatrix} -1 & -1 \\ 12 & -10 \end{bmatrix}$

blue:  $\begin{bmatrix} 32 & -4 \\ -18 & 12 \end{bmatrix}$

b.  $\begin{bmatrix} 5 & -2 & 2 \\ -1 & 1 & 0 \end{bmatrix} \begin{bmatrix} -9 & 0 & 2 \\ 2 & 2 & -4 \end{bmatrix}$

$2 \times 3$        $2 \times 3$



can't be done, because numbers  
in middle do not match.