1. (10 pts) For the matrix **A** shown, determine (*a*) det **A**, (*b*) $\mathbf{A}^{-1}$ using method of successive transformations of *rows*.

$$\mathbf{A} = \begin{bmatrix} 3 & 0 & 1 \\ -14 & -2 & -4 \\ 20 & 4 & 5 \end{bmatrix} \qquad \mathbf{B} = \begin{bmatrix} 2 & -2 & 7 \\ -3 & 2 & -9 \\ 4 & -2 & 12 \end{bmatrix}$$

2. (10 pts) For the matrix **B** shown, determine (*a*) det **B**, (*b*) $\mathbf{B}^{-1}$ using method of successive transformations of *columns*.

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1. det $\mathbf{A} = 2$

$$\mathbf{A}^{-1} = \begin{bmatrix} 3 & 2 & 1 \\ -5 & -2.5 & -1 \\ -8 & -6 & -3 \end{bmatrix}$$

2. det $\mathbf{B} = -2$

$$\mathbf{B}^{-1} = \begin{bmatrix} -3 & -5 & -2 \\ 0 & 2 & 1.5 \\ 1 & 2 & 1 \end{bmatrix}$$