



## Inverse of a Matrix



Instructions: For each matrix, calculate the determinant and hence write the inverse. Where there is no inverse, type "none" on the line.

The first one is done for you

1.  $A = \begin{pmatrix} 2 & 4 \\ 1 & 3 \end{pmatrix}$      $\text{Det } A = 2$      $A^{-1} = \frac{1}{2} \begin{pmatrix} 3 & -4 \\ -1 & 2 \end{pmatrix}$      $A^{-1} = \underline{\hspace{2cm}}$

2.  $B = \begin{pmatrix} 2 & 1 \\ 3 & 2 \end{pmatrix}$      $\text{Det } B =$      $B^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $B^{-1} = \underline{\hspace{2cm}}$

3.  $C = \begin{pmatrix} 6 & 2 \\ 3 & 4 \end{pmatrix}$      $\text{Det } C =$      $C^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $C^{-1} = \underline{\hspace{2cm}}$

4.  $D = \begin{pmatrix} 7 & 2 \\ 14 & 4 \end{pmatrix}$      $\text{Det } D =$      $D^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $D^{-1} = \underline{\hspace{2cm}}$

5.  $E = \begin{pmatrix} 5 & 2 \\ 4 & -3 \end{pmatrix}$      $\text{Det } E =$      $E^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $E^{-1} = \underline{\hspace{2cm}}$

6.  $F = \begin{pmatrix} -9 & -6 \\ -4 & -3 \end{pmatrix}$      $\text{Det } F =$      $F^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $F^{-1} = \underline{\hspace{2cm}}$

7.  $G = \begin{pmatrix} 3 & 4 \\ 6 & 7 \end{pmatrix}$      $\text{Det } G =$      $G^{-1} = - \begin{pmatrix} \quad & \quad \\ \quad & \quad \end{pmatrix}$      $G^{-1} = \underline{\hspace{2cm}}$