

Do each of the following matrices have inverses? If so, compute them.

1. $A = \begin{pmatrix} 1 & 2 & -1 \\ 0 & 2 & 3 \\ -1 & -2 & 0 \end{pmatrix}$

$$A^{-1} = \begin{pmatrix} -3 & -1 & -4 \\ 3/2 & 1/2 & 3/2 \\ -1 & 0 & -1 \end{pmatrix}$$

2. $B = \begin{pmatrix} 2 & 2 & -1 \\ 0 & -4 & 1 \\ -1 & 1 & 0 \end{pmatrix}$

B is not invertible.