

Name:

1. For each of the following matrices, either compute the inverse or state that no inverse exists.

(a) $A = \begin{pmatrix} 1 & 3 & 1 \\ -1 & -4 & 0 \\ 0 & 2 & -2 \end{pmatrix}$

(b) $B = \begin{pmatrix} 1 & 3 & 1 \\ -1 & -4 & 0 \\ 0 & 2 & 2 \end{pmatrix}$

2. Answer the following with either “true” or “false”: for any invertible 2×2 invertible matrices A and B , AB is invertible and

$$(AB)^{-1} = A^{-1}B^{-1}.$$