

Name:

1. Compute the inverse of the following matrix if it exists.

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

2. Let B be an $n \times n$ matrix. Circle the statement which is *not* equivalent to B being invertible.

- (a) The equation $B\mathbf{x} = \mathbf{0}$ has only the trivial solution.
- (b) The equation $B\mathbf{x} = \mathbf{b}$ has a solution for all $\mathbf{b} \in \mathbb{R}^n$.
- (c) $\dim \text{Col } B + \dim \text{Nul } B = n$.
- (d) The rows of B are linearly independent.