1. Calculate the determinant of the following matrix. Is the matrix singular or non-singular? 1 / 1 point

$$A = \begin{bmatrix} 2 & 3 \\ 2 & 4 \end{bmatrix}$$

Hint: To find the determinant apply the formula $ad - bc$. A matrix of determinant 0 is singular, while a determinant different than 0 represents a complete system, thus a non-singular matrix.

- ○ $\det(A) = 2$. The matrix is singular.
- ○ $\det(A) = 0$. The matrix is singular.
- ◉ $\det(A) = 2$. The matrix is non-singular.
- ○ $\det(A) = -2$. The matrix is singular.

Correct
You have correctly calculated the determinant and identified the singularity of the matrix.

2. Determine if this matrix has linearly dependent or independent rows. 1 / 1 point

$$\begin{bmatrix} 1 & 2 \\ 2 & 3 \end{bmatrix}$$

- ◉ Linearly independent
- ○ Linearly dependent
- ○ It cannot be determined

Correct
The matrix has linearly independent rows. You cannot obtain one row by using row operations on the other row.