

Directions Read the following directions.

1. Prove or disprove that: $\det(AB) = \det(A)\det(B)$

2. Prove or disprove that: $\det(A + B) = \det(A) + \det(B)$

3.

$$\det\left(\begin{bmatrix} 1 & 3 \\ 2 & 1 \end{bmatrix}\right)$$

4.

$$\det\left(\begin{bmatrix} 2 & 4 & 0 \\ 1 & 1 & 2 \\ 1 & 0 & -1 \end{bmatrix}\right)$$

5.

$$\det\left(\begin{bmatrix} 2 & 1 & 0 & 3 \\ 4 & 0 & 2 & 0 \\ 1 & -1 & 1 & 2 \\ 0 & 0 & -1 & 2 \end{bmatrix}\right)$$