

Question 1 True/False: A square matrix A is invertible if and only if $\det A \neq 0$.

Multiple Choice:

- (a) True
(b) False ✓

Question 2 What is $\det A$ if $\det A^T = 9$.

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Question 3 What is $\det AB$ if $\det A = 3$ and $\det B = 8$.

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Question 4 Let $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ and $\det A = 5$. Find the determinant of $B = \begin{bmatrix} 2a & 2b \\ c & d \end{bmatrix}$.

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Question 5 Let $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ and $\det A = 8$. Find the determinant of $B = \begin{bmatrix} c & d \\ a & b \end{bmatrix}$.

-8

Question 6 Let $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ and $\det A = 3$. Find the determinant of $B = \begin{bmatrix} a & b \\ 4a + c & 4b + d \end{bmatrix}$.

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