

Determinant Practice Problems

Find the determinant

1. $\begin{pmatrix} 3 & 1 \\ 4 & 3 \end{pmatrix}$

3. $\begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix}$

5. $\begin{pmatrix} 4 & 5 \\ 1 & 0 \end{pmatrix}$

2. $\begin{pmatrix} 1 & 2 \\ 3 & 2 \end{pmatrix}$

4. $\begin{pmatrix} 1 & 2 \\ 4 & 8 \end{pmatrix}$

6. $\begin{pmatrix} 3 & 5 \\ 1 & 4 \end{pmatrix}$

Find the determinant using Gauss' method

1. $\begin{pmatrix} 0 & 1 & 0 \\ 0 & 3 & 1 \\ 1 & 4 & 3 \end{pmatrix}$

3. $\begin{pmatrix} 1 & 0 & 1 \\ 3 & 2 & 1 \\ 1 & 1 & 1 \end{pmatrix}$

5. $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 2 \end{pmatrix}$

2. $\begin{pmatrix} 3 & 4 & 2 \\ 2 & 3 & 5 \\ 1 & 1 & 4 \end{pmatrix}$

4. $\begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 7 \\ 1 & 0 & 3 \end{pmatrix}$

6. $\begin{pmatrix} 1 & -1 & 1 \\ 3 & 2 & 3 \\ 4 & 2 & 4 \end{pmatrix}$

Find the determinant using cofactor expansion along any row or column you choose

1. $\begin{pmatrix} 0 & 1 & 0 \\ 0 & 3 & 1 \\ 1 & 4 & 3 \end{pmatrix}$

3. $\begin{pmatrix} 1 & 0 & 1 \\ 3 & 2 & 1 \\ 1 & 1 & 1 \end{pmatrix}$

5. $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 2 \end{pmatrix}$

2. $\begin{pmatrix} 3 & 4 & 2 \\ 2 & 3 & 5 \\ 1 & 1 & 4 \end{pmatrix}$

4. $\begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 7 \\ 1 & 0 & 3 \end{pmatrix}$

6. $\begin{pmatrix} 1 & -1 & 1 \\ 3 & 2 & 3 \\ 4 & 2 & 4 \end{pmatrix}$

Find the determinant using any method you choose

1. $\begin{pmatrix} 1 & 0 \\ 3 & 1 \end{pmatrix}$

4. $\begin{pmatrix} 2 & 1 & -1 & 3 \\ 0 & 2 & 5 & 4 \\ 0 & 0 & -1 & 3 \\ 0 & 0 & 2 & 5 \end{pmatrix}$

7. $\begin{pmatrix} 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 \\ 1 & 2 & 3 & 2 \\ 1 & 1 & 1 & 2 \end{pmatrix}$

2. $\begin{pmatrix} 0 & 4 & 2 \\ 0 & 3 & 5 \\ 1 & 1 & 4 \end{pmatrix}$

5. $\begin{pmatrix} 1 & 3 & 1 & 3 \\ 0 & 1 & 0 & 2 \\ 1 & 4 & 2 & 5 \\ 0 & -2 & 1 & 0 \end{pmatrix}$

8. $\begin{pmatrix} 2 & 1 & 0 & 3 \\ 0 & 1 & 3 & 3 \\ 1 & 2 & 3 & 6 \\ 1 & 1 & 1 & 3 \end{pmatrix}$

3. $\begin{pmatrix} 1 & 2 & 1 \\ 3 & 6 & 1 \\ 8 & 1 & 1 \end{pmatrix}$

6. $\begin{pmatrix} 1 & -1 & 1 \\ 3 & -3 & 3 \\ 6 & 2 & -4 \end{pmatrix}$

9. $\begin{pmatrix} 1 & 3 & 4 \\ 2 & 6 & 9 \\ 3 & 1 & -2 \end{pmatrix}$