

Matrices M5: Determinants

Find the value of the determinant:

1. $\begin{vmatrix} 2 & 1 \\ 0 & 1 \end{vmatrix}$

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

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

4. $\begin{vmatrix} 3 & 1 & 4 \\ -1 & 0 & 2 \\ 2 & 5 & -6 \end{vmatrix}$

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

6. $\begin{vmatrix} 4 & 0 & 3 \\ 2 & 1 & -1 \\ 3 & 7 & -2 \end{vmatrix}$

7. Find x if $\begin{vmatrix} 2 & 1 \\ -2 & x \end{vmatrix} = 0$

8. Find x if $\begin{vmatrix} x & 3 \\ 1 & x \end{vmatrix} = 10$

9. Find x if $\begin{vmatrix} x & 3 \\ 1 & x \end{vmatrix} = 6$

10. Find the value of the determinant. $\begin{vmatrix} 3 & 1 \\ -1 & 5 \end{vmatrix}$

a. 16

b. 14

c. 9

d. 7