

Find the determinant

Name _____

Date _____

Use $ad - bc$ for 2×2 ; cofactor expansion or row reduction for 3×3 .

Problem	Answer	Problem	Answer
1. $\begin{bmatrix} 3 & 1 \\ 2 & 4 \end{bmatrix}$		5. $\begin{bmatrix} 2 & 0 & 1 \\ 1 & 3 & 2 \\ 1 & 1 & 1 \end{bmatrix}$	
2. $\begin{bmatrix} 5 & 2 \\ 7 & 3 \end{bmatrix}$		6. $\begin{bmatrix} 1 & 2 & 3 \\ 0 & 1 & 4 \\ 5 & 6 & 0 \end{bmatrix}$	
3. $\begin{bmatrix} 1 & 2 \\ 2 & 4 \end{bmatrix}$		7. $\begin{bmatrix} 2 & 1 & -1 \\ -3 & -1 & 2 \\ -2 & 1 & 2 \end{bmatrix}$	
4. $\begin{bmatrix} -2 & 3 \\ 4 & 1 \end{bmatrix}$		8. $\begin{bmatrix} 4 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 3 \end{bmatrix}$	

Answer key — Find the determinant

#	Problem	Answer
1	$[[3, 1], [2, 4]]$	10
2	$[[5, 2], [7, 3]]$	1
3	$[[1, 2], [2, 4]]$	0
4	$[[{-2}, 3], [4, 1]]$	-14
5	$[[2, 0, 1], [1, 3, 2], [1, 1, 1]]$	0
6	$[[1, 2, 3], [0, 1, 4], [5, 6, 0]]$	1
7	$[[2, 1, -1], [-3, -1, 2], [-2, 1, 2]]$	-1
8	$[[4, 0, 0], [0, 2, 0], [0, 0, 3]]$	24