

## 11.4: (DETERMINANTS OF MATRICES)

<p>The sum of all solutions of <math>\begin{vmatrix} -x &amp; 1 &amp; x \\ 2 &amp; 0 &amp; 1 \\ 0 &amp; 2 &amp; x \end{vmatrix} = x^2</math>, is</p> <p><b>A) 4</b></p> <p>B) -4</p> <p>C) 5</p> <p>D) -5</p> <p>E) 0</p>	<p>Determinants of Matrices.</p>
<p>If <math>\begin{vmatrix} 2 &amp; 3 &amp; 4 \\ -1 &amp; 2 &amp; 3 \\ a &amp; 2b &amp; 3c \end{vmatrix} = 3</math>, then <math>\begin{vmatrix} 2a &amp; 6c + 10 &amp; 4b + 7 \\ a &amp; 3c &amp; 2b \\ 2 &amp; -6 &amp; -4 \end{vmatrix} =</math></p> <p><b>A) -6</b></p> <p>B) -12</p> <p>C) 18</p> <p>D) 10</p> <p>E) -8</p>	<p>Determinants of Matrices.</p>
<p>The cofactor of the element <math>x</math> in the matrix <math>\begin{bmatrix} 2 &amp; -1 &amp; 3 &amp; 0 \\ 4 &amp; 0 &amp; x &amp; 4 \\ 0 &amp; 0 &amp; 1 &amp; -1 \\ -1 &amp; -1 &amp; 2 &amp; 0 \end{bmatrix}</math> is</p> <p><b>A) 3</b></p> <p>B) 0</p> <p>C) <math>-3x</math></p> <p>D) -1</p> <p>E) <math>-2x</math></p>	<p>Determinants of Matrices.</p>

<p>The sum of the solutions of the equation <math>\begin{vmatrix} 1 &amp; -1 &amp; 2 \\ 0 &amp; x &amp; 1 \\ 3 &amp; 2 &amp; x-1 \end{vmatrix} = -17</math> is equal to</p> <p>A) 7  B) -7  C) 12  D) -12  E) -6</p>	<p>Determinants of Matrices.</p>
<p>If <math>A</math> is a matrix of order <math>3 \times 3</math> with <math> A  = 4</math> and <math>B</math> is a matrix of order <math>4 \times 4</math> with <math> B  = 3</math>, then <math> 2B^{-1}  - \frac{1}{6} 2A  =</math></p> <p>A) 0  B) 24  C) -24  D) 2  E) -2</p>	<p>Determinants of Matrices.</p>
<p>The determinant <math>\begin{vmatrix} 1 &amp; a &amp; 0 \\ 1 &amp; 0 &amp; b \\ 0 &amp; c &amp; 1 \end{vmatrix}</math> is equal to</p> <p>A) <math>-a - bc</math>  B) <math>-a + bc</math>  C) <math>-1 - bc</math>  D) <math>a - bc</math>  E) <math>a + bc</math></p>	<p>Determinants of Matrices.</p>

<p>Given the matrix <math>\begin{bmatrix} 2 &amp; 3 &amp; 4 \\ 3 &amp; 4 &amp; 0 \\ 2 &amp; 1 &amp; 1 \end{bmatrix}</math>, the value of <math>M_{12} + 2C_{23}</math> is</p> <p>A) 11  B) -5  C) -17  D) 3  E) 10</p>	Determinants of Matrices.
<p>Given the matrix <math>\begin{bmatrix} -1 &amp; x &amp; x \\ -i &amp; 2 &amp; 1 \\ x &amp; -x &amp; i \end{bmatrix}</math>, where <math>i = \sqrt{-1}</math>, If the minor <math>M_{12} = 0</math>, then</p> <p><math>x =</math></p> <p>A) 1  B) 0  C) -1  D) 2  E) -2</p>	Determinants of Matrices.
<p>The sum of all the solutions of <math>\begin{vmatrix} 0 &amp; x &amp; 2 \\ x - 1 &amp; 1 &amp; -1 \\ 1 &amp; 2 &amp; -1 \end{vmatrix} = 2</math>, is equal to:</p> <p>A) -2  B) -4  C) 1  D) 4  E) 2</p>	Determinants of Matrices.

If  $A = \begin{bmatrix} 1 & -1 & 0 & 3 \\ 2 & 1 & 3 & -2 \\ 3 & 0 & 1 & 4 \\ 0 & 2 & 0 & -1 \end{bmatrix}$ , then the cofactor  $A_{23}$

A) -7

B) 7

C) -8

D) 10

E) -10

Determinants  
of Matrices.

Let  $A$  and  $B$  be  $3 \times 3$  matrices. If  $|A| = \frac{1}{2}$  and  $|B| = \frac{1}{3}$  are the determinants of  $A$  and  $B$ , then  $|2AB| - 2|B^{-1}| =$

A)  $-\frac{14}{3}$

B)  $\frac{14}{3}$

C)  $-\frac{68}{3}$

D)  $\frac{1}{3}$

E)  $-\frac{1}{3}$

Determinants  
of Matrices.