

Name: ANSWER KEYScore:

Evaluate the determinant:

$$\begin{vmatrix} 2 & -5 & 1 \\ -3 & 1 & 6 \\ 4 & -2 & 3 \end{vmatrix} = 2 \begin{vmatrix} 1 & 6 \\ -2 & 3 \end{vmatrix} - (-5) \begin{vmatrix} -3 & 6 \\ 4 & 3 \end{vmatrix} + 1 \begin{vmatrix} -3 & 1 \\ 4 & -2 \end{vmatrix}$$
$$= 2(1 \cdot 3 - 6(-2)) + 5(-3 \cdot 3 - 6 \cdot 4) + 1((-3)(-2) - 1 \cdot 4)$$
$$= 2(3 + 12) + 5(-9 - 24) + (6 - 4)$$
$$= 2(15) + 5(-33) + (2) = -133$$