(c)

$$\begin{vmatrix} 1 & -1 & -1 & -1 \\ -1 & 1 & -1 & -1 \\ -1 & -1 & 1 & -1 \\ -1 & -1 & 1 & -1 \end{vmatrix}$$

두 행이 같으므로 행렬식 = 0.

$$\begin{vmatrix} 1 & -1 & -1 & -1 \\ -1 & 1 & -1 & -1 \\ -1 & -1 & 1 & -1 \\ -1 & -1 & -1 & -1 \end{vmatrix} = \begin{vmatrix} 1 & -1 & -1 & -1 \\ 0 & 0 & -2 & -2 \\ 0 & -2 & 0 & -2 \\ 0 & -2 & -2 & -2 \end{vmatrix}$$

$$= (-1) \begin{vmatrix} 1 & -1 & -1 & -1 \\ 0 & -2 & -2 & -2 \\ 0 & -2 & 0 & -2 \\ 0 & 0 & -2 & -2 \end{vmatrix} = (-1) \begin{vmatrix} 1 & -1 & -1 & -1 \\ 0 & -2 & -2 & -2 \\ 0 & 0 & 2 & 0 \\ 0 & 0 & -2 & -2 \end{vmatrix}$$

$$= (-1) \begin{vmatrix} 1 & -1 & -1 & -1 \\ 0 & -2 & -2 & -2 \\ 0 & 0 & 2 & 0 \\ 0 & 0 & 0 & -2 \end{vmatrix}$$

$$= -8$$