$$\begin{vmatrix} 0 & 0 & a_1 & b_1 \\ 0 & 0 & a_2 & b_2 \\ a_3 & b_3 & 0 & 0 \\ a_4 & b_4 & 0 & 0 \end{vmatrix} \rightarrow$$ بسط حول سطر اول

$$= a_1\left(b_2(a_3b_4 - b_3a_4)\right) + b_1\left(a_2(a_3b_4 - b_3a_4)\right)$$

$$= (a_3b_4 - b_3a_4)(a_1b_2 + a_2b_1)$$

$$\begin{vmatrix} a_1 & 0 & 0 & b_1 \\ 0 & a_2 & b_2 & 0 \\ 0 & b_3 & a_3 & 0 \\ b_4 & 0 & 0 & a_4 \end{vmatrix} =$$ بسط حول سطر اول $\rightarrow$

$$= a_1\begin{vmatrix} a_2 & b_2 & 0 \\ b_3 & a_3 & 0 \\ 0 & 0 & a_4 \end{vmatrix} - b_1\begin{vmatrix} 0 & a_2 & b_2 \\ 0 & b_3 & a_3 \\ b_4 & 0 & 0 \end{vmatrix}$$

$$= a_1a_4(a_2a_3 - b_2b_3) - b_1b_4(a_2a_3 - b_2b_3)$$

$$= (a_2a_3 - b_2b_3)(a_1a_4 - b_1b_4)$$