

DETERMINANTY

1) Vypočítejte determinanty:

$$\begin{vmatrix} 1 & 2 \\ -1 & -3 \end{vmatrix}, \begin{vmatrix} 1 & 2 & 0 \\ 1 & 2 & 3 \\ -1 & 1 & -2 \end{vmatrix}, \begin{vmatrix} 1 & 5 \\ -6 & 6 \end{vmatrix}, \begin{vmatrix} 1 & 0 & 3 \\ 2 & 1 & 1 \\ -3 & -2 & 1 \end{vmatrix}, \begin{vmatrix} 1 & 0 & 1 & 1 \\ 1 & -1 & 2 & 0 \\ 1 & 2 & -4 & 1 \\ 2 & 0 & -3 & 0 \end{vmatrix},$$
$$\begin{vmatrix} 1 & 2 & 3 & 1 \\ 1 & -1 & 2 & 1 \\ 1 & -1 & 2 & 0 \\ 1 & 1 & 0 & 0 \end{vmatrix}, \begin{vmatrix} -2 & -3 \\ 4 & 1 \end{vmatrix}, \begin{vmatrix} 1 & 2 & 1 & 1 \\ -1 & 1 & 3 & 0 \\ -2 & 0 & 1 & 2 \\ 0 & -1 & 0 & 3 \end{vmatrix}, \begin{vmatrix} 4 & -3 & 5 \\ -3 & 2 & -8 \\ 1 & -7 & -5 \end{vmatrix}$$

výsledky: -1, -9, 36, 0, 4, 8, 10, -34, -100

2) Určete determinanty matic:

$$A = \begin{vmatrix} 4 & -3 \\ 8 & -5 \end{vmatrix} \quad B = \begin{vmatrix} x+y & x-y \\ x-y & x+y \end{vmatrix}$$

Výsledek: det A = 4, det B = 4xy

3) Určete determinanty matic:

$$A = \begin{vmatrix} 1 & 2 & 5 \\ 3 & 4 & 7 \\ 6 & 8 & 9 \end{vmatrix} \quad B = \begin{vmatrix} 1 & 2 & 5 \\ 2 & 4 & 7 \\ 4 & 8 & 9 \end{vmatrix} \quad C = \begin{vmatrix} 1 & 2 & 3 \\ 0 & 0 & 0 \\ -3 & 5 & 4 \end{vmatrix}$$

Výsledek: det A = 10, det B = 0, det C = 0