

Výsledky domácích úkolů ke cvičení č. 4

1.

$$\begin{pmatrix} \frac{1}{4} & \frac{1}{2} & -\frac{1}{2} & \frac{1}{2} & -\frac{1}{4} \\ \frac{1}{2} & -2 & 1 & -1 & \frac{1}{2} \\ -\frac{1}{2} & 1 & 0 & 1 & -\frac{1}{2} \\ \frac{1}{2} & -1 & 1 & -2 & \frac{1}{2} \\ -\frac{1}{4} & \frac{1}{2} & -\frac{1}{2} & \frac{1}{2} & \frac{1}{4} \end{pmatrix} \quad \begin{pmatrix} 1 & -2 & \frac{1}{3} & -2 & \frac{2}{3} \\ -2 & 5 & -1 & 6 & -2 \\ \frac{1}{3} & -1 & \frac{1}{3} & -1 & \frac{1}{3} \\ -2 & 6 & -1 & 5 & -2 \\ \frac{2}{3} & -2 & \frac{1}{3} & -2 & 1 \end{pmatrix}$$

2.

$$\begin{pmatrix} 0 & -1 & 1 & -1 & 1 & -1 \\ 1 & 0 & -1 & 1 & -1 & 1 \\ -1 & 1 & 0 & -1 & 1 & -1 \\ 1 & -1 & 1 & 0 & -1 & 1 \\ -1 & 1 & -1 & 1 & 0 & -1 \\ 1 & -1 & 1 & -1 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 0 & 1 & 1 & 0 & -1 & -1 \\ 1 & 2 & 1 & 0 & -2 & -1 \\ 1 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 1 \\ -1 & -2 & 0 & 1 & 2 & 1 \\ -1 & -1 & 0 & 1 & 1 & 0 \end{pmatrix}$$

3.

$$\begin{pmatrix} 1 & 1 & 1 & 1 & \dots & 1 & 1 & 1 & 2^{-n} \\ -1 & 0 & 0 & 0 & \dots & 0 & 0 & 0 & 1 \\ 0 & -1 & 0 & 0 & \dots & 0 & 0 & 0 & 1 \\ 0 & 0 & -1 & 0 & \dots & 0 & 0 & 0 & 1 \\ \vdots & \vdots & \vdots & \vdots & & \vdots & \vdots & \vdots & \vdots \\ 0 & 0 & 0 & 0 & \dots & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & \dots & -1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & \dots & 0 & -1 & 0 & 1 \\ 0 & 0 & 0 & 0 & \dots & 0 & 0 & -1 & 1 \end{pmatrix}$$

4.

$$\frac{1}{2} \cdot \begin{pmatrix} 1 & 0 & 0 & \dots & 0 & 0 & 1 \\ 0 & 0 & 0 & \dots & 0 & 1 & -1 \\ 0 & 0 & 0 & \dots & 1 & -1 & 0 \\ \vdots & \vdots & \vdots & & \vdots & \vdots & \vdots \\ 0 & 0 & 1 & \dots & 0 & 0 & 0 \\ 0 & 1 & -1 & \dots & 0 & 0 & 0 \\ 1 & -1 & 0 & \dots & 0 & 0 & 0 \end{pmatrix}$$

5.

$$\frac{1}{2} \cdot \begin{pmatrix} 2 & -1 & 1 & -1 & 1 & \dots & 1 & -1 & 1 \\ -1 & 0 & -1 & 1 & -1 & \dots & -1 & 1 & -1 \\ 1 & -1 & 2 & -1 & 1 & \dots & 1 & -1 & 1 \\ -1 & 1 & -1 & 0 & -1 & \dots & -1 & 1 & -1 \\ 1 & -1 & 1 & -1 & 2 & \dots & 1 & -1 & 1 \\ \vdots & \vdots & \vdots & \vdots & \vdots & & \vdots & \vdots & \vdots \\ 1 & -1 & 1 & -1 & 1 & \dots & 2 & -1 & 1 \\ -1 & 1 & -1 & 1 & -1 & \dots & -1 & 0 & -1 \\ 1 & -1 & 1 & -1 & 1 & \dots & 1 & -1 & 2 \end{pmatrix}$$