

K matici A nalezněte matici adjungovanou a inverzní

1.

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 4 & 2 \\ 3 & 2 & 1 \end{pmatrix}.$$

10.

$$A = \begin{pmatrix} 3 & 0 & 3 \\ 2 & -2 & -2 \\ -2 & 2 & 0 \end{pmatrix}.$$

19.

$$A = \begin{pmatrix} 4 & -2 & 2 \\ 4 & 2 & 1 \\ 2 & 1 & 0 \end{pmatrix}.$$

2.

$$A = \begin{pmatrix} 0 & -1 & 3 \\ -3 & 1 & 0 \\ 1 & -2 & 3 \end{pmatrix}.$$

11.

$$A = \begin{pmatrix} 3 & -1 & 2 \\ 1 & -2 & 1 \\ 2 & -1 & 2 \end{pmatrix}.$$

20.

$$A = \begin{pmatrix} 1 & 2 & 0 \\ 1 & 2 & 2 \\ 1 & -2 & -3 \end{pmatrix}.$$

3.

$$A = \begin{pmatrix} 1 & 4 & 4 \\ -1 & 0 & -1 \\ 1 & 3 & 2 \end{pmatrix}.$$

12.

$$A = \begin{pmatrix} -1 & 0 & -2 \\ -1 & 1 & 2 \\ 0 & 0 & 3 \end{pmatrix}.$$

21.

$$A = \begin{pmatrix} 0 & -1 & 3 \\ -3 & 1 & 0 \\ 1 & -2 & 3 \end{pmatrix}.$$

4.

$$A = \begin{pmatrix} 2 & -1 & -1 \\ 0 & 1 & -1 \\ 0 & 0 & -1 \end{pmatrix}.$$

13.

$$A = \begin{pmatrix} -2 & -1 & -1 \\ -1 & -3 & 2 \\ 2 & 2 & 2 \end{pmatrix}.$$

5.

$$A = \begin{pmatrix} 2 & -3 & 1 \\ -1 & 2 & -2 \\ 3 & -1 & 2 \end{pmatrix}.$$

14.

$$A = \begin{pmatrix} 2 & -3 & 3 \\ -1 & 2 & -2 \\ 3 & 1 & 1 \end{pmatrix}.$$

22.

$$A = \begin{pmatrix} 2 & 1 & 2 \\ 1 & -2 & -1 \\ 3 & -1 & 1 \end{pmatrix}.$$

6.

$$A = \begin{pmatrix} 1 & 2 & 0 \\ 2 & 3 & 2 \\ -1 & 2 & 1 \end{pmatrix}.$$

15.

$$A = \begin{pmatrix} -3 & 1 & -2 \\ 0 & -1 & 3 \\ -1 & 0 & -2 \end{pmatrix}.$$

23.

$$A = \begin{pmatrix} -1 & 1 & 4 \\ 0 & 1 & 1 \\ 0 & -1 & 0 \end{pmatrix}.$$

7.

$$A = \begin{pmatrix} -2 & -2 & 0 \\ -1 & -3 & 0 \\ -1 & -1 & -1 \end{pmatrix}.$$

16.

$$A = \begin{pmatrix} 1 & 2 & 0 \\ 1 & 3 & 2 \\ -1 & 2 & 1 \end{pmatrix}.$$

24.

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 0 & 2 \\ 3 & 2 & 1 \end{pmatrix}.$$

8.

$$A = \begin{pmatrix} 1 & 2 & 2 \\ 3 & 1 & 2 \\ -1 & 3 & 1 \end{pmatrix}.$$

17.

$$A = \begin{pmatrix} -1 & 2 & 2 \\ 0 & -1 & 3 \\ 0 & 2 & -1 \end{pmatrix}.$$

9.

$$A = \begin{pmatrix} -2 & 2 & 1 \\ -2 & 0 & 0 \\ 1 & -2 & 0 \end{pmatrix}.$$

18.

$$A = \begin{pmatrix} 2 & -2 & 0 \\ 0 & 1 & 1 \\ 1 & 3 & -1 \end{pmatrix}.$$

25.

$$A = \begin{pmatrix} 1 & -3 & 2 \\ 1 & -2 & 1 \\ 2 & -1 & 2 \end{pmatrix}.$$

K matici A nalezněte matici adjungovanou a inverzní

1.
$$A^{-1} = \begin{pmatrix} 0 & -\frac{1}{4} & \frac{1}{2} \\ -\frac{1}{4} & \frac{1}{2} & -\frac{1}{4} \\ \frac{1}{2} & -\frac{1}{4} & 0 \end{pmatrix}.$$

10.
$$A^{-1} = \begin{pmatrix} \frac{1}{3} & \frac{1}{2} & \frac{1}{2} \\ \frac{1}{3} & \frac{1}{2} & 1 \\ 0 & -\frac{1}{2} & -\frac{1}{2} \end{pmatrix}.$$

19.
$$A^{-1} = \begin{pmatrix} \frac{1}{8} & -\frac{1}{4} & \frac{3}{4} \\ -\frac{1}{4} & \frac{1}{2} & -\frac{1}{2} \\ 0 & 1 & -2 \end{pmatrix}.$$

2.
$$A^{-1} = \begin{pmatrix} \frac{1}{3} & -\frac{1}{2} & -\frac{1}{3} \\ \frac{2}{3} & -\frac{1}{2} & -\frac{2}{3} \\ \frac{2}{3} & -\frac{1}{6} & -\frac{1}{2} \end{pmatrix}.$$

11.
$$A^{-1} = \begin{pmatrix} 1 & 0 & -1 \\ 0 & -\frac{2}{3} & \frac{1}{3} \\ -1 & -\frac{1}{3} & \frac{2}{3} \end{pmatrix}.$$

20.
$$A^{-1} = \begin{pmatrix} -\frac{1}{4} & \frac{3}{4} & \frac{1}{2} \\ \frac{5}{8} & -\frac{3}{8} & -\frac{1}{4} \\ -\frac{1}{2} & \frac{1}{2} & 0 \end{pmatrix}.$$

3.
$$A^{-1} = \begin{pmatrix} -\frac{3}{5} & -\frac{4}{5} & \frac{4}{5} \\ -\frac{1}{5} & \frac{2}{5} & \frac{3}{5} \\ \frac{3}{5} & -\frac{1}{5} & -\frac{4}{5} \end{pmatrix}.$$

12.
$$A^{-1} = \begin{pmatrix} -1 & 0 & -2 \\ -1 & 1 & -\frac{4}{3} \\ 0 & 0 & \frac{1}{3} \end{pmatrix}.$$

21.
$$A^{-1} = \begin{pmatrix} \frac{1}{2} & -\frac{1}{2} & -\frac{1}{2} \\ \frac{3}{2} & -\frac{1}{2} & -\frac{3}{2} \\ \frac{3}{2} & -\frac{1}{2} & -\frac{1}{2} \end{pmatrix}$$

4.
$$A^{-1} = \begin{pmatrix} \frac{1}{2} & \frac{1}{2} & -1 \\ 0 & 1 & -1 \\ 0 & 0 & -1 \end{pmatrix}.$$

13.
$$A^{-1} = \begin{pmatrix} -1 & 0 & -\frac{1}{2} \\ \frac{3}{5} & -\frac{1}{5} & \frac{1}{2} \\ -\frac{2}{5} & \frac{1}{5} & \frac{1}{2} \end{pmatrix}.$$

5.
$$A^{-1} = \begin{pmatrix} \frac{2}{11} & \frac{5}{11} & \frac{4}{11} \\ -\frac{4}{11} & \frac{1}{11} & \frac{3}{11} \\ -\frac{5}{11} & -\frac{7}{11} & \frac{1}{11} \end{pmatrix}.$$

14.
$$A^{-1} = \begin{pmatrix} 2 & 3 & 0 \\ -\frac{5}{2} & -\frac{7}{2} & \frac{1}{2} \\ -\frac{7}{2} & -\frac{11}{2} & \frac{1}{2} \end{pmatrix}.$$

22. A^{-1} neexistuje, $\tilde{A} = \begin{pmatrix} -3 & -4 & 5 \\ -3 & -4 & 5 \\ 3 & 4 & -5 \end{pmatrix}^T$

6.
$$A^{-1} = \begin{pmatrix} \frac{1}{9} & \frac{2}{9} & -\frac{4}{9} \\ \frac{4}{9} & -\frac{1}{9} & \frac{2}{9} \\ -\frac{7}{9} & \frac{4}{9} & \frac{1}{9} \end{pmatrix}.$$

15.
$$A^{-1} = \begin{pmatrix} -\frac{2}{7} & -\frac{2}{7} & -\frac{1}{7} \\ \frac{3}{7} & -\frac{4}{7} & -\frac{6}{7} \\ \frac{1}{7} & \frac{1}{7} & -\frac{3}{7} \end{pmatrix}.$$

23.
$$A^{-1} = \begin{pmatrix} -1 & 4 & 3 \\ 0 & 0 & -1 \\ 0 & 1 & 1 \end{pmatrix}.$$

7.
$$A^{-1} = \begin{pmatrix} -\frac{3}{4} & \frac{1}{2} & 0 \\ \frac{1}{4} & -\frac{1}{2} & 0 \\ \frac{1}{2} & 0 & -1 \end{pmatrix}.$$

16.
$$A^{-1} = \begin{pmatrix} \frac{1}{5} & \frac{2}{7} & -\frac{4}{7} \\ \frac{3}{7} & -\frac{1}{7} & \frac{2}{7} \\ -\frac{5}{7} & \frac{4}{7} & -\frac{1}{7} \end{pmatrix}.$$

24.
$$A^{-1} = \begin{pmatrix} -\frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\ \frac{1}{4} & -\frac{1}{2} & \frac{1}{4} \\ \frac{1}{4} & \frac{1}{4} & -\frac{1}{4} \end{pmatrix}.$$

8.
$$A^{-1} = \begin{pmatrix} -1 & \frac{4}{5} & \frac{2}{5} \\ -1 & \frac{3}{5} & \frac{4}{5} \\ 2 & -1 & -1 \end{pmatrix}.$$

17.
$$A^{-1} = \begin{pmatrix} -1 & \frac{6}{5} & \frac{8}{5} \\ 0 & \frac{1}{5} & \frac{3}{5} \\ 0 & \frac{2}{5} & \frac{1}{5} \end{pmatrix}.$$

9.
$$A^{-1} = \begin{pmatrix} 0 & -\frac{1}{2} & 0 \\ 0 & -\frac{1}{4} & -\frac{1}{2} \\ 1 & -\frac{1}{2} & 1 \end{pmatrix}.$$

18.
$$A^{-1} = \begin{pmatrix} \frac{2}{5} & \frac{1}{5} & \frac{1}{5} \\ -\frac{5}{10} & \frac{1}{5} & -\frac{1}{5} \\ -\frac{1}{10} & \frac{2}{5} & -\frac{1}{5} \end{pmatrix}.$$

25.
$$A^{-1} = \begin{pmatrix} -1 & \frac{4}{3} & \frac{1}{3} \\ 0 & -\frac{2}{3} & \frac{1}{3} \\ 1 & -\frac{1}{3} & \frac{1}{3} \end{pmatrix}.$$