

Zadaci za vežbu (1. vežbe)

1. Date su matrice: $A = \begin{bmatrix} -1 \\ 2 \\ -2 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 0 \\ 2 & 3 \end{bmatrix}$, $C = \begin{bmatrix} -1 & 2 \\ -4 & 3 \\ 2 & -2 \end{bmatrix}$, $D = \begin{bmatrix} -1 & 1 \end{bmatrix}$, $E = \begin{bmatrix} -1 & 0 \\ 2 & -2 \\ 4 & 3 \end{bmatrix}$

$F = \begin{bmatrix} 0 & 1 & -2 \\ 2 & -2 & 1 \\ 3 & 0 & -1 \end{bmatrix}$, $G = \begin{bmatrix} -1 \\ 3 \end{bmatrix}$, $H = \begin{bmatrix} 2 & 3 \end{bmatrix}$, $I = \begin{bmatrix} 1 & 2 & 3 \\ 0 & -1 & 2 \\ -2 & 1 & 2 \end{bmatrix}$, $J = \begin{bmatrix} 2 & 1 \\ 3 & 3 \end{bmatrix}$

Izračunati, ukoliko je moguće:

a) $2A - 3B, 2B, 2C - E, 3F - I, 2H + 5I, B - I, D + H,$

b) $2A^2, BD, DB, CF, FG, AD, 2A - 3FA, 2G + BG, 3IA, HB - 3D, BJB, FI, IF, EC, FE + 2IC.$

2. Naći inverzne matrice sledećih matrica (ukoliko postoje):

$$A = \begin{bmatrix} 1 & -1 & 1 \\ -1 & 4 & 0 \\ 1 & 1 & -1 \end{bmatrix}, B = \begin{bmatrix} 3 & -4 & 5 \\ 2 & -3 & 1 \\ 3 & -5 & -1 \end{bmatrix}, C = \begin{bmatrix} 0 & 1 & -1 \\ 1 & 0 & -1 \\ 1 & -1 & 0 \end{bmatrix}, D = \begin{bmatrix} -1 & 1 & -1 \\ 1 & -1 & -1 \\ 1 & -1 & 1 \end{bmatrix},$$

$$E = \begin{bmatrix} 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 \end{bmatrix}, F = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 1 & 2 \\ 1 & 1 & 1 & -1 \\ 1 & 0 & -2 & -6 \end{bmatrix}, G = \begin{bmatrix} 1 & 2 \\ 2 & 5 \end{bmatrix}, H = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}.$$