

15. 3. 2021 Matematika

1) Samostatná práce – poslat vyřešené do 16. 3. 2021 na martina.cernikova@zshlubocky.cz

Řešení soustavy dvou lineárních rovnic – jakou použijete metodu, nechám na vás

$$\begin{array}{l} x + y = 100 \\ 0,1x - 0,1y = 1 \end{array}$$

$$\begin{array}{l} 2u + v = 4 \\ 4u + 3v = 6 \end{array}$$

2) Práce z minulé hodiny: PS str. 98/A4 c, d

c)

$$\begin{array}{l} 2u + \frac{v}{2} = -7 \quad / \cdot 2 \\ \frac{u}{3} - 3v = 5 \quad / \cdot 3 \\ \hline 4u + v = -14 \\ u - 9v = 15 \quad / \cdot (-4) \\ \hline 4u + v = -14 \\ -4u + 36v = -60 \\ \hline 37v = -74 \quad / : 37 \\ v = -2 \end{array}$$

$$\begin{array}{l} u - 9 \cdot (-2) = 15 \\ u = 15 - 18 \\ u = -3 \end{array}$$

$$\begin{array}{l} L_1 = 2 \cdot (-3) + \frac{-2}{2} = -6 - 1 = -7 \\ P_1 = -7 \\ L_1 = P_1 \\ L_2 = \frac{-3}{3} - 3 \cdot (-2) = -1 + 6 = 5 \\ P_2 = 5 \\ L_2 = P_2 \end{array}$$

d)

$$\begin{array}{l} \frac{x}{2} - y = \frac{1}{2} \quad / \cdot 2 \\ x - \frac{y}{2} = -\frac{1}{2} \quad / \cdot 2 \\ \hline x - 2y = 1 \quad / \cdot (-2) \\ 2x - y = -1 \\ -2x + 4y = -2 \\ \hline 2x - y = -1 \\ 3y = -3 \\ y = -1 \end{array}$$

$$\begin{array}{l} x - 2 \cdot (-1) = 1 \\ x = -1 \end{array}$$

$$\begin{array}{l} L_1 = -\frac{1}{2} - (-1) = \frac{1}{2} \\ P_1 = \frac{1}{2} \\ L_1 = P_1 \\ L_2 = -1 - \left(-\frac{1}{2}\right) = -1 + \frac{1}{2} = -\frac{1}{2} \\ P_2 = -\frac{1}{2} \\ L_2 = P_2 \end{array}$$

$$\begin{array}{l} \text{c) } x + 15y = -11 \quad / \cdot (-3) \\ \underline{3x + 5y = 7} \\ -3x - 45y = 33 \\ \underline{3x + 5y = 7} \\ -40y = 40 \\ y = -1 \end{array}$$

$$\begin{array}{l} x + 15 \cdot (-1) = -11 \\ x = -11 + 15 \\ x = 4 \end{array}$$

$$\begin{array}{l} L_1 = 4 + 15 \cdot (-1) = -11 \\ P_1 = -11 \\ L_1 = P_1 \\ L_2 = 3 \cdot 4 + 5 \cdot (-1) = 12 - 5 = 7 \\ P_2 = 7 \\ L_2 = P_2 \end{array}$$

$$\begin{array}{l} \text{d) } x + y = 10 \\ \underline{x - y = 4} \\ 2x = 14 \\ x = 7 \\ 7 + y = 10 \\ y = 3 \end{array}$$

$$\begin{array}{l} L_1 = 7 + 3 = 10 \\ P_1 = 10 \\ L_1 = P_1 \\ L_2 = 7 - 3 = 4 \\ P_2 = 4 \\ L_2 = P_2 \end{array}$$

3) Slovní úlohy řešené rovnicemi

PS str. 105/A1, A2

106/ A3

107/A 6