

## Sistemi linearnih jednačina

### 1. Rešiti sisteme jednačina

$$\begin{array}{ll}
 (a) \begin{cases} x - 2y - 7 = 0 \\ 5(x - 2y - 7) - 9(2x - y - 8) = 0 \end{cases} & (b) \begin{cases} 2(3x + y + 1) - 3(x + 5y - 3) = 2 \\ -6x + 26y = 18 \end{cases} \\
 (c) \begin{cases} 2(x - 3y + 5) - 4(x - (2 - y)) = 3 - x \\ -x - 10y + 15 = 0 \end{cases} & (d) \begin{cases} -3(x - 2y - 4) - (2 - (y - 3x)) = 4 \\ -12x + 14y = 7 \end{cases} \\
 (e) \begin{cases} 4(x + 2) - 7(x - y) = 7 \\ 7(x + y) + 10(x - 2) = 79 \end{cases} & (f) \begin{cases} (x - 1)(y + 2) - (x - 2)(y + 5) = 0 \\ (x + 4)(y - 3) - (x + 7)(y - 4) = 0 \end{cases} \\
 (g) \begin{cases} (x - 2)^2 - x(x + y) = y(1 - x) - 5 \\ (1 - y)(1 + y) = 2x - y^2 - 2\left(x + \frac{1}{2}\right) \end{cases} & (h) \begin{cases} 3y - (x + 2)(y - 1) = -xy \\ (x + 2)^2 - (2y + 1)^2 = (x - 2y)(x + 2y) - 13 \end{cases}
 \end{array}$$

rešenje:

$$\begin{array}{l}
 (a) x = 3, y = -2, \quad (b) \text{ sistem je neodređen, } (c) \text{ sistem je neodređen, } (d) \text{ nema rešenja} \\
 (e) x = 5, y = 2, \quad (f) x = 5, y = 7, \quad (g) \text{ nema rešenja, } (h) x = -3, y = 1
 \end{array}$$

### 2. Rešiti sisteme jednačina

$$\begin{array}{l}
 (a) \frac{8x - 5y + 1}{12} - \frac{4x - 7y + 5}{6} = \frac{6y - 5x - 4}{9} \quad \bigwedge \quad \frac{3x - y}{2} - \frac{8x + y + 1}{3} = \frac{2x - y + 1}{6} \\
 (b) \frac{5x - 3y}{3} - \frac{2y - 3x}{5} = x + 1 \quad \bigwedge \quad \frac{2x - 3y}{3} - \frac{3y - 4x}{2} = y + 1 \\
 (c) \frac{7 + x}{5} - \frac{2x - y}{4} - 3y = -5 \quad \bigwedge \quad \frac{5y - 7}{2} + \frac{4x - 3}{6} - 18 = -5x \\
 (d) \frac{2(x - y)}{3} + 1, 6 = \frac{8x}{15} - \frac{3y - 10}{5} \quad \bigwedge \quad \frac{3x + 4}{4} + \frac{y}{8} = \frac{5x}{6} - \frac{y - 17}{12}
 \end{array}$$

rešenje:

$$(a) x = 1, y = -3, \quad (b) x = 3, y = 2, \quad (c) x = 3, y = 2, \quad (d) x = 5, y = 4$$

### 3. Uvođenjem novih nepoznatih rešiti sledeće sisteme jednačina

$$\begin{array}{l}
 (a) \frac{5}{3x} + \frac{2}{5y} = 7 \quad \bigwedge \quad \frac{7}{6x} - \frac{1}{10y} = 3 \\
 (b) \frac{3}{4x} + \frac{1}{2y} = 0, 7 \quad \bigwedge \quad \frac{9}{4x} - \frac{3}{2y} = 0, 9 \\
 (c) \frac{6}{x + y - 1} - \frac{3}{x - y + 1} = 1 \quad \bigwedge \quad \frac{9}{x + y - 1} + \frac{6}{x - y + 1} = 5 \\
 (d) \frac{6}{2x + y - 1} - \frac{2}{2x - y + 3} = \frac{5}{2} \quad \bigwedge \quad \frac{4}{2x + y - 1} - \frac{4}{y - 2x - 3} = 3 \\
 (e) \frac{5}{3x - 2y - 2} + 5x - 4y + 1 = 11 \quad \bigwedge \quad \frac{5}{3x - 2y - 2} + 3(5x - 4y + 1) = 31
 \end{array}$$

rešenje:

$$(a) x = \frac{1}{3}, y = \frac{1}{5}, (b) x = 1,5, y = 2,5, (c) x = 3, y = 1, (d) x = 1, y = 1, (e) x = 5, y = 4$$