PRIMJER - M_2 test MATEMATIKA

- ekonomski tehničari -

Zadatak 1 *Za vrijenosti argumenta (nezavisno promjenljive)* $x_1 = -2,\ x_2 = -1, x_3 = -\frac{2}{3}, x_4 = 0, x_5 = \frac{1}{2},\ x_5 = 1$ *i* $x_4 = 2$ *odredi vrijednost funkcija:*

1) $f(x) = x^3 + 2x - 3$ 2) $f(x) = 2x^2 - 3x - 1$ 3) $f(x) = -x^2 + 2x + 1$

4) $f(x) = x^2 - 2x - 5$ 5) $f(x) = x^3 + x + 2$ 6) $f(x) = -x^3 - 2x + 1$

Zadatak 2 *Riješi linearne jednadžbe: (str 40., zadatak 90)*

1) $3x + 8 - 6x = 2x + 3$ *2)* $-7x + 2 - 10x + 15 = 30 - 20x + 17$

4) $2x + 9 = 3(x - 7)$ *5)* $x - 18 = 5x + 2(3 - x)$

7) $3x - 11 = 5(x + 7)$ *8)* $x - 19 = 5(x - 1) + 6 - 2x$

9) $5(2x - 12) = 3(x - 2) + 1$ *10)* $8(x - 1) = 13(x + 3)$

Zadatak 3 *Riješi linearne jednadžbe: (str 40., zadatak 90)*

1) $2(x + 5) - \frac{x + 3}{4} = 9 - x$ *2)* $\frac{1}{2}(x + 3) + \frac{9 - x}{3} = \frac{x - 4}{4}$

4) $x - 8 + \frac{1 - x}{5} = 2\left(4 - \frac{7x + 1}{5}\right)$ *5)* $5(2 - x) + \frac{8 - x}{2} = 15 - 2(1 - x) + \frac{4 - x}{4}$

7) $\frac{2}{3}(x - 7) + \frac{1}{2} = \frac{1}{6}x$ *8)* $\frac{x - 2}{4} - \frac{2x - 3}{3} = 1$

9) $\frac{1}{2}(2x + 3) - \frac{1}{10}(x + 4) = \frac{1}{2}$ *10)* $\frac{2x - 1}{3} - \frac{3x - 1}{2} = \frac{-x - 2}{2}$

Zadatak 4 *Nacrtaj i analiziraj graf linearne funkcije:*

1) $f(x) = 3x + 2$ *2)* $f(x) = -x + \frac{1}{2}$ *3)* $f(x) = 3x$

4) $y = -x + 2$ *5)* $y = -2x + \frac{2}{3}$ *6)* $y = \frac{3}{5}x + 1$

Zadatak 5 *Riješi sustave linearnih jednadžbi*

1) $\begin{array}{l} x + 3y - 15 = 0 \\ 3x - y + 5 = 0 \end{array}$ 2) $\begin{array}{l} 2x + 3y - 13 = 0 \\ 5x - y - 7 = 0 \end{array}$ 3) $\begin{array}{l} 2x + 4y = 2 \\ 3x - 2y = -13 \end{array}$

4) $\begin{array}{l} x + 2y - 6 = 0 \\ -x - y9 + 13 = 0 \end{array}$ 5) $\begin{array}{l} 3x - 2y - 1 = 0 \\ 6x - 4y - 2 = 0 \end{array}$ 6) $\begin{array}{l} 3x + 4y = -27 \\ 4x - 2y = -14 \end{array}$

Zadatak 6 *Riješi sustave linearnih jednadžbi (str.100, zad. 518 i 519)*

1) $\begin{array}{l} \frac{1}{3}x - y = \frac{1}{3} \\ -\frac{2}{5}x + y = -1 \end{array}$ 2) $\begin{array}{l} \frac{x+y}{2} - \frac{x-y}{2} = 8 \\ \frac{x+y}{3} - \frac{x-y}{4} = 11 \end{array}$ 3) $\begin{array}{l} \frac{3x-1}{5} + 3y - 4 = 15 \\ \frac{3y-5}{6} + 2x - 8 = \frac{23}{3} \end{array}$

Zadatak 7 *Riješi linearne nejednadžbe:*

1) $2x - 4 > x - 6$ *2)* $3x + 2 < 5x + 1$ *3)* $x - 1 > 2x + 3$

4) $3x + 2 < 4x - 1$ *5)* $2x - 1 \geq x + 3$ *6)* $8(x - 1) > 1 - x$

Zadatak 8 *Riješi sustave linearnih nejednadžbi*

1) $\begin{array}{l} x + 2 > 0 \\ x - 2 < 0 \end{array}$ 2) $\begin{array}{l} 2x - 1 > 0 \\ 3x + 2 \geq 0 \end{array}$ 3) $\begin{array}{l} 4 - x \leq 0 \\ 2 - 3x < 0 \end{array}$

4) $\begin{array}{l} 2x - 8 < 0 \\ x > 3 - 2x \end{array}$ 5) $\begin{array}{l} \frac{1}{2}x + 1 \geq 0 \\ 3 - \frac{1}{2}x < 0 \end{array}$ 6) $\begin{array}{l} \frac{3}{2}x - 1 \geq \frac{1}{2}x - \frac{1}{4} \\ x + 3 \geq 2(x - 1) \end{array}$