

Egyenletek - Algebra

Gyakorlatok

1) pl: 70/6

$$\begin{aligned} \text{g) } (4x-1)^2 &= (4x-2)(4x+3) \\ 16x^2 - 8x + 1 &= 16x^2 + 12x - 8x - 6 \\ \cancel{16x^2} - 8x + 1 - \cancel{16x^2} - 12x + 8x &= -6 - 1 \\ -12x &= -7 \quad | :(-12) \\ x &= \frac{7}{12} \quad ; \quad M = \left\{ \frac{7}{12} \right\} \end{aligned}$$

$$\begin{aligned} \text{h) } 7x^2 - (\sqrt{7}x+1)^2 &= -2\sqrt{7}x + 2 \\ 7x^2 - (7x^2 + 2\sqrt{7}x + 1) &= -2\sqrt{7}x + 2 \\ \cancel{7x^2} - \cancel{7x^2} - 2\sqrt{7}x - 1 &= -2\sqrt{7}x + 2 \\ -2\sqrt{7}x + 2\sqrt{7}x &= 2 + 1 \\ 0 &= 3, \text{ halmaz} \Rightarrow M = \emptyset \end{aligned}$$

pl. 70/7

$$\text{a) } (4-x)^2 - ax + \frac{12}{x} = 0 \quad ; \quad x=2 \text{ gyöke az egyenletnek}$$

$$\begin{aligned} (4-2)^2 - a \cdot 2 + \frac{12}{2} &= 0 \\ 4 - 2a + 6 &= 0 \\ -2a + 10 &= 0 \\ -2a &= -10 \quad | :(-2) \\ \underline{a} &= \underline{5} \end{aligned}$$

Pl. 70/8

$$d) \frac{1}{x-2} + \frac{2}{x+2} = \frac{7}{x^2-4}$$

$$\frac{x+2}{x-2} + \frac{x-2}{2} = \frac{7}{(x-2)(x+2)}$$

$$| \cdot (x-2)(x+2)$$

$$x+2 + 2 \cdot (x-2) = 7 \cdot 1$$

$$x+2 + 2x-4 = 7$$

$$3x-2 = 7$$

$$3x = 7+2$$

$$3x = 9 \quad | : 3$$

$$x = 3$$

$$M = \{3\}$$

Hj / Peldatör

70/6 ij

7b

71/8a