Ασκ. ②

Έστω $2\lambda x = (\lambda - 1)\cdot x + 4\cdot(x+3)$ (1)

α) Αν $\lambda = -3$ να λυθεί η (1)

Λύση: $2\cdot(-3)\cdot x = (-3-1)\cdot x + 4\cdot(x+3)$

$-6x = -4x + 4x + 12$

$-6x = 12$

$x = -2$

β) Αν $x = 3$ τότε $\lambda = ;$

Λύση:

$$2 \cdot \lambda \cdot 3 = (\lambda - 1) \cdot 3 + 4 \cdot (3+3)$$

$$6\lambda = 3\lambda - 3 + 24$$

$$6\lambda - 3\lambda = -3 + 24$$

$$3\lambda = 21$$

$$\lambda = \frac{21}{3}$$

Άρα $\boxed{\lambda = 7}$

γ) $\lambda = ;$ αν η (1) Αδύνατη.

Λύση: $2\lambda x = \lambda x - x + 4x + 1$

$2\lambda x - \lambda x + x - 4x = 1$

$\lambda x - 3x = 1$ Άρα

$x \cdot (\lambda - 3) = 1$ Άρα

$(\lambda - 3) \cdot x = 1$

$(\alpha \cdot x = \beta)$ $\boxed{\beta \neq 0}$

τρίτη $\lambda - 3 = 0$

$\boxed{\lambda = 3}$

Αβ11. ②

$$\frac{14x+1}{3} - x = \frac{17x+4}{3} - (2x+1)$$

ΛΥΣΗ: $3 \cdot \frac{14x+1}{3} - 3x = 3 \cdot \frac{17x+4}{3} - 3(2x+1)$

$$14x+1-3x = 17x+4-6x-3$$

$$14x-3x-17x+6x = -1+4-3$$

$$0 = 0$$

ΑΟΡΙΣΤΗ

Ask. 3)

$$\frac{w-5}{2} - \frac{7w}{2} = -\frac{14}{4} - (3w-9)$$

Lösn:

$$\cancel{4}^{2} \cdot \frac{w-5}{\cancel{2}} - \cancel{4}^{2} \cdot \frac{7w}{\cancel{2}} = -\cancel{4} \cdot \frac{14}{\cancel{4}} - 4(3w-9)$$

$$2 \cdot (w-5) - 14w = -14 - 12w + 36$$

$$2w - 10 - 14w = -14 - 12w + 36$$

$$2w - 14w + 12w = 10 - 14 + 36$$

$$0 = 32$$

ADİNATH

Αθ. 4

Έστω $A = x - 1 + \frac{2 - x}{3}$ και $B = \frac{3x + 1}{3} - \frac{3x - 1}{2}$

α) Να γράψετε ως ένα κλάσμα καθεμία από τις παραστάσεις Α και Β.

Λύση: $A = \frac{x}{1} - \frac{1}{1} + \frac{2 - x}{3} = \frac{3x}{3} - \frac{3}{3} + \frac{2 - x}{3}$

$= \frac{3x - 3 + 2 - x}{3} = \frac{2x - 1}{3}$ Άρα $A = \frac{2x - 1}{3}$

$B = \frac{6x + 2}{6} - \frac{9x - 3}{6} = \frac{6x + 2 - 9x + 3}{6} = \frac{5 - 3x}{6}$ $B = \frac{5 - 3x}{6}$

β) Να βρείτε για ποιες τιμές του x ισχύουν οι παρακάτω ισότητες:

i) $A = -\frac{5}{2} \cdot B$ και ii) $A - B = -7$

i) Λύση: $\frac{2x-1}{3} = -\frac{5}{2} \cdot \frac{5-3x}{6}$

$\frac{2x-1}{3} = -\frac{25-15x}{12} \Leftrightarrow 12 \cdot (2x-1) = -3(25-15x)$

$24x - 12 = -75 + 45x$

$24x - 45x = -75 + 12$

$-21x = -63$

$x = \frac{63}{21}$

$x = 3$

ii) $A - B = -7$

Nüfn: $\frac{2x-1}{3} - \frac{5-3x}{6} = -7$

$\overset{2}{\cancel{6}} \cdot \frac{2x-1}{\cancel{3}} - \cancel{6} \cdot \frac{5-3x}{\cancel{6}} = -42$

$4x - 2 - (5 - 3x) = -42$

$4x - 2 - 5 + 3x = -42$

$4x + 3x = -42 + 2 + 5$

$7x = -35$

$x = -\frac{35}{7}$

$x = -5$

Ασκ. ⑤

$$\frac{x-\frac{5}{2}}{3}-\frac{3\left(x+\frac{4}{3}\right)}{5}+\frac{7}{2}=0$$

Λύση: $30\cdot\frac{x-\frac{5}{2}}{3}-30\cdot\frac{3\left(x+\frac{4}{3}\right)}{5}+30\cdot\frac{7}{2}=0$

$$10\cdot\left(x-\frac{5}{2}\right)-18\left(x+\frac{4}{3}\right)+105=0$$

$$10x-25-18x-24+105=0$$

$$10x-18x=25+24-105$$

$$-8x=49-105$$

$$-8x=-56$$

$$10x-5\cdot\frac{5}{2}-18x-6\cdot\frac{4}{3}+105=0$$

$$x=7$$