

13/10/24

$$(y+2)^2 + (y-1)^2 = 5(2y+3)$$

$$y^2 + 4y + 4 + y^2 - 2y + 1 = 10y + 15$$

$$y^2 + 4y + 4 + y^2 - 2y + 1 - 10y - 15 = 0$$

$$2y^2 - 8y - 10 = 0$$

$$\begin{array}{l|l} a=2 & \Delta = b^2 - 4ac = (-8)^2 - 4 \cdot 2 \cdot (-10) = 64 + 80 = 144 \\ b=-8 & \Delta = 144 > 0 \\ c=-10 & y = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{8 \pm \sqrt{144}}{2 \cdot 2} = \frac{8 \pm 12}{4} \\ -b=8 & \begin{cases} \frac{8+12}{4} = \frac{20}{4} = 5 \\ \frac{8-12}{4} = \frac{-4}{4} = -1 \end{cases} \end{array}$$

Άσκ 5 σελ 97

$$a) \frac{x^2-1}{3} - \frac{x+3}{5} = x-2$$

Θέλουμε να διορθώσουμε τους παρονομαστές,
πολλαπλασιάζοντας με το ΕΚΠ τους. $\text{ΕΚΠ}(3,5) =$

$$\cancel{15} \frac{x^2-1}{\cancel{3}} - \cancel{3} \frac{x+3}{\cancel{5}} = 15(x-2)$$

$$5(x^2-1) - 3(x+3) = 15(x-2)$$

$$5x^2 - 5 - 3x - 9 = 15x - 30$$

$$5x^2 - 5 - 3x - 9 - 15x + 30 = 0$$

$$5x^2 - 18x + 16 = 0$$

$$\begin{array}{l|l} a=5 & \Delta = b^2 - 4ac = (-18)^2 - 4 \cdot 5 \cdot 16 = 324 - 320 \\ b=-18 & \Delta = 4 > 0 \text{ δύο λύσεις} \\ c=16 & x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{18 \pm \sqrt{4}}{2 \cdot 5} = \frac{18 \pm 2}{10} \\ -b=18 & \begin{cases} \frac{18+2}{10} = \frac{20}{10} = 2 \\ \frac{18-2}{10} = \frac{16}{10} = \frac{8}{5} \end{cases} \end{array}$$

$$\begin{array}{r} 18 \\ \times 18 \\ \hline 144 \\ 18 \\ \hline 324 \end{array} \quad \begin{array}{r} 16 \\ \times 20 \\ \hline 00 \\ 32 \\ \hline 320 \end{array}$$

Hw

Άσκ 5 σελ 97