Zadatci

Udžbenik, stranica 36.

3.) $\frac{1}{2n} + \frac{1}{2n+2} = \frac{11}{60}$

$\frac{1}{2} + \frac{1}{2(n+1)} = \frac{11}{60} / \cdot 2$

$\frac{1}{n} + \frac{1}{n+1} = \frac{11}{30} / \cdot 30n(n+1)$

$30n+1+30n = 11n(n+1)$

$30n+1+30n = 11n^2+11n$

$-11n^2+49n+1=0$

$x_{1,2} = \frac{-49 \pm \sqrt{49^2-4\cdot(-11)}}{2\cdot(-11)}$

$x_1 = 4{,}47$

$x_2 = 0{,}02$

4.) $x + \frac{1}{x} = \frac{50}{7} / \cdot 7x \quad x \neq 0$

$7x^2+7=50x$

$7x-50x+7=0$

$x_1 = \frac{1}{7}$

$x_2 = 7$

11.) **1.)** $(2n-3)^2 + (2n-1)^2 = (2n-5)^2$

$4n^2-12n+9+4n^2-4n+1 = 4n^2-20n+25$

$4n^2+4n-15=0$

$x_1 = -\frac{5}{2}$

$x_2 = \frac{3}{2}$

2.) $(2n)^2 + (2n+4)^2 = (2n+4)^2$

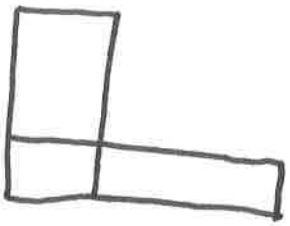
$4n^2 + 4n^2 + 8n + 4 = 4n^2 + 16n + 16$

$4n^2 - 8n - 12 = 0$

$x_1 = -1$

$x_2 = 3$

14.) SKICA:



$x \cdot y + x \cdot y - x \cdot x = 30$

$-x^2 + xy + xy - 30 = 0$

$-x + 2xy - 30 = 0$

$x_1 = -2\sqrt{31}$

$x_2 = 1 - \sqrt{31}$

15.) $\frac{12}{x} + \frac{12}{x-18} = 1 \quad / (x-18) \cdot x$

$12(x-18) + 12x = x(x-18)$

$12x - 216 + 12x = x^2 - 18$

$x^2 - 42x + 216 = 0$

$x_1 = 6$

$x_2 = 36$