$\Leftrightarrow \quad 6x - 2(2x-5) = 3(2-x)$

$\Leftrightarrow \quad 6x - 4x + 10 = 6 - 3x \qquad | + 3x - 10$

$\Leftrightarrow \quad 6x - 4x + 3x = 6 - 10$

$\Leftrightarrow \quad 5x = -4 \qquad | : 5 \qquad \Leftrightarrow \quad x = -\frac{4}{5}$

2. Polynomien tulo

2.5 a) $(x^2-3)(4x-2) = 4x^3 - 2x^2 - 12x + 6$

b) $(-6x^2+2x)(4x-3) = -24x^3 + 18x^2 + 8x^2 - 6x$

$= -24x^3 + 26x^2 - 6x$

2.18 $\underline{(2x+1)\cdot(4x-2)}\cdot(4x^2+1)$

$= (8x^2 - 4x + 4x - 2)\cdot(4x^2+1)$

$= (8x^2 - 2)(4x^2+1)$

$= 32x^4 + 8x^2 - 8x^2 - 2$

$= \underline{32x^4 - 2}$

2.24 a) $\ulcorner \quad 1 + 5 = 6 = 2\cdot 3$ ✓

$7 + 11 = 18 = 2\cdot 9$ ✓

$\vdots$

$\lrcorner$

Tod. $(2k+1) + (2l+1) \qquad k, l \in \mathbb{Z}$

$= 2k + 2l + 2$

$= 2\cdot(\underbrace{k + l + 1}_{\in \mathbb{Z}})$ ✓ parillinen $\Rightarrow$ väite

3. Summan neliö ja erotuksen neliö

$(a+b)^2 = (a+b)(a+b) = a^2 + ab + ba + b^2 = a^2 + 2ab + b^2$

$(a-b)^2 = (a-b)(a-b) = a^2 - ab - ba + b^2 = a^2 - 2ab + b^2$

$$\boxed{\begin{aligned}(a+b)^2 &= a^2 + 2ab + b^2 \\ (a-b)^2 &= a^2 - 2ab + b^2\end{aligned}}$$

BINOMIN NELIÖ

Esim. a) $(2x+3)^2 = (2x)^2 + 2\cdot 2x\cdot 3 + 3^2 = 4x^2 + 12x + 9$

b) $(5-3y^2)^2 = 5^2 - 2\cdot 5\cdot 3y^2 + (3y^2)^2 = 25 - 30y^2 + 9y^4$