

Toegepaste wiskunde - Week 1

Moulijes wegworke

$$1) (3 + \sqrt{5})(\sqrt{7} - 2)$$

$$(2p + 1)^2$$

$$(a^4 + 1)(a^4 - 1)$$

$$\left(-3a^2 - \frac{1}{3}\right)^2$$

$$(3x + y)(3x - y)$$

$$2) (x + 2)(x - 2)$$

$$-(x^2 - \frac{1}{2}x)^2$$

$$-(b^2 - ab)(b^2 + ab)$$

$$\left(\frac{1}{a} - \frac{1}{b}\right)^2$$

$$2\sqrt{5}(3\sqrt{10} - 4\sqrt{5} + 2\sqrt{15})$$

Ontbind in factoren

$$1) x^4 - 4a^2$$

$$14t^3 + 49 + t^6$$

$$s^4 - 10s^2 + 21$$

$$6c^2 + c - 12$$

$$3) \cancel{a^3} =$$

$$\cancel{a^3} =$$

$$b^2(x+3) + b(x+3) =$$

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

$$2) a^2 - x^2$$

$$a^2 - 4x^2$$

$$a^8 - 6a^4b^2 + 9b^4$$

$$ab + ac + bp + cp$$

$$(2x+1)^2 - (x+2)^2$$

$$3x^2 + 11x + 10$$

Lineaire vergelijkingen

$$\begin{cases} x + y = 5 \\ 2x + 3y = 13 \end{cases}$$

$$\begin{cases} 2x + 2y = 10 \\ -y = -3 \end{cases}$$

$$\begin{cases} \frac{t}{3} + \frac{s}{5} = 5 \\ 3s - 5t = 15 \end{cases}$$

$$\begin{cases} 2a + 8b = -5 \\ -6a - 4b = -10 \end{cases}$$

$$\begin{cases} 2a = -8b - 5 \\ -6a - 4b = -10 \end{cases}$$

$$\begin{cases} 6p - 4q = 22 \\ 3p = 11 + 2q \end{cases}$$

$$\begin{cases} s = 1 - t \\ -3t = 3s + 2 \end{cases}$$

$$\begin{cases} a + b + c = 7 \\ 2a - b + c = 1 \\ a - b - 2c = -4 \end{cases}$$

Brüche bewerten

$$\textcircled{1} \quad \frac{x^2 + 5x + 6}{x^2 + 4x + 4}$$

$$\text{a) } \frac{x^2 + 5x + 6}{x^2 + 4x + 4}$$

$$\text{b) } \frac{x^2 + 5x}{x^2 - 25}$$

$$\text{c) } \frac{a^3 - a}{a^2 - 1}$$

$$\text{d) } \frac{x^2 + xy}{x + y}$$

$$\text{e) } \frac{x - (x - y)}{y^2}$$

$$\text{f) } \frac{x^3 - x^2 y^2}{x^2 - xy^2}$$

$$\text{g) } \frac{y^7 - xy^6}{y^5 + x^5 y^7}$$

$$\text{h) } \frac{5x^4 y^5 z^2}{10x^3 y^4 z^4}$$

$$\text{i) } \frac{x - y}{\frac{1}{x + y}}$$

$$\text{j) } \frac{a - a^3}{a^4 - 1}$$

Staartdelingen

$$a) \frac{2x^3 - 5x^2 + 7x - 4}{x-1}$$

$$b) \frac{-4x^4 + x^3 - 5x^2 + 6}{2x^2 + 1}$$

Ontbind deze veelterm in factoren:

$$f(x) = x^3 - 2x^2 - 5x + 6$$

$$f(x) = x^3 + 4x^2 - 7x + 10$$