

## Polynomien kertolasku

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$$a) 3x^2 \cdot 2x^3 = 3 \cdot 2 \cdot x \cdot x \cdot x \cdot x \cdot x = 6x^5$$

$$\text{TÄÄ} \quad = 3 \cdot 2 \cdot x^{2+3} = 6x^5$$

$$b) 4x(-3x^2+2x) = 4 \cdot (-3)x^{1+2} + 4 \cdot 2x^{1+1} = \underline{\underline{-12x^3+8x^2}}$$

$$c) (5x^2-2x)(-3x+1) = -15x^3 + \underline{5x^2} + \underline{6x^2} - 2x$$
$$= -15x^3 + 11x^2 - 2x$$

$$d) (-4x^2+2)^2 = (-4x^2+2)(-4x^2+2) = 16x^4 - 8x^2 - 8x^2 + 4$$
$$= \underline{\underline{16x^4 - 16x^2 + 4}}$$

2.9



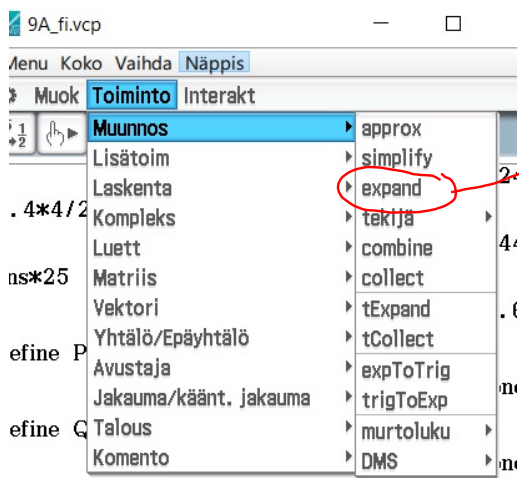
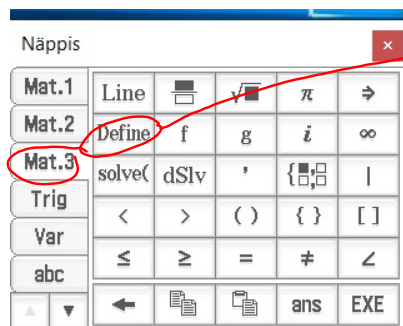
E4

Olkoon  $P(x) = 3x^2 - 5x$  ja

$Q(x) = 2x^2 - 4x + 2$ . Sievennä CAS-laskimella.

a)  $P(x)Q(x)$

b)  $2xP(x) - 3xQ(x)$



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Define P(x)=3x^2-5x
done
Define Q(x)=2x^2-4x+2
done
P(x)Q(x)
(3*x^2-5*x)*(2*x^2-4*x+2)
expand((3*x^2-5*x)*(2*x^2-4*x+2))
6*x^4-22*x^3+26*x^2-10*x
expand((3*x^2-5*x)*(2*x^2-4*x+2))
6*x^4-22*x^3+26*x^2-10*x
expand(P(x)Q(x))
6*x^4-22*x^3+26*x^2-10*x

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*Sieventää polynomien*