

Öva konjugatregeln

Definition: $(a+b)(a-b) = a^2-ab+ab-b^2 = a^2 - b^2$

Exempel: $(x+4)(x-4) = x^2-4^2 = x^2-16$

Använd konjugatregeln som i exemplet ovan

$$(x+1)(x-1) = \underline{\hspace{15em}}$$

$$(x+2)(x-2) = \underline{\hspace{15em}}$$

$$(x+5)(x-5) = \underline{\hspace{15em}}$$

$$(x+10)(x-10) = \underline{\hspace{15em}}$$

$$(2x+1)(2x-1) = \underline{\hspace{15em}}$$

$$(2x+5)(2x-5) = \underline{\hspace{15em}}$$

$$(x^2+4)(x^2-4) = \underline{\hspace{15em}}$$

$$(x^2+x)(x^2-x) = \underline{\hspace{15em}}$$

$$(x+2)(x+2) = \underline{\hspace{15em}}$$

$$(x+5)(x-7) = \underline{\hspace{15em}}$$

$$(x+2)(-x+2) = \underline{\hspace{15em}}$$

$$(x-2)(x+2) = \underline{\hspace{15em}}$$

Använd konjugatregeln "baklänges"

$$x^2 - 1 = \underline{\hspace{15em}}$$

$$x^2 - 9 = \underline{\hspace{15em}}$$

$$16 - x^2 = \underline{\hspace{15em}}$$

$$9x^2 - 81 = \underline{\hspace{15em}}$$



Facit

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

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

$$(x+5)(x-5) = x^2 - 25$$

$$(x+10)(x-10) = x^2 - 100$$

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

$$(2x+5)(2x-5) = 4x^2 - 25$$

$$(x^2+4)(x^2-4) = x^4 - 16$$

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

$$(x+2)(x+2) = (x+2)^2 = x^2 + 4x + 4$$

$$(x+5)(x-7) = x^2 - 7x + 5x - 35 = x^2 - 2x - 35$$

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

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

Använd konjugatregeln "baklänges"

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

$$x^2 - 9 = (x+3)(x-3)$$

$$16 - x^2 = (4+x)(4-x)$$

$$9x^2 - 81 = (3x+9)(3x-9)$$