

$$x^2 - 2xy + y^2 = x^2 - xy - xy + y^2 = x(x-y) - y(x-y) = (x-y)$$

$$(x-y) = (x-y)^2$$

$$x^2 - y^2 = x^2 - y^2 + xy - xy = x(x+y) - y(y+x) = (x+y)(x-y)$$

$$x^2 + 4x - 5 = x^2 + 5x - x - 5 = x(x-1) + 5(x-1) = (x+5)(x-1)$$

$$4 = 5 - 1$$

$$(a*b)^2 = (a*b)*(a*b) = (a*a)*(b*b) = a^2*b^2$$

$$a^6 = (a^2)^3 = (a^3)^2$$

$$a^6 = a*a*a*a*a*a =$$

$$= (a*a)*(a*a)*(a*a) =$$

$$= (a^2)(a^2)(a^2) = (a^2)^3$$

$$x^2 - 2xy + y^2 = (x-y)^2$$

$$x^2 + 2xy + y^2 = (x+y)^2$$

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

$$a^6 = a*a*a*a*a*a =$$

$$= (a*a*a)(a*a*a) =$$

$$= (a^3)(a^3) = (a^3)^2$$

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

$$= \underline{(x^2)^2 + 2^2 + 2x^2*2} - 2x^2*2 =$$

$$= \underline{(x^2)^2 + 2x^2*2 + 2^2} - 2x^2*2 =$$

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

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

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