

Разложите на множители способом группировки

$$3x + 3y - bx - by;$$

$$x^7 - x^3 - 4x^4 - 4;$$

$$\underbrace{a^3b^2} - \underbrace{a^2} + \underbrace{a^2b^2} - a;$$

$$3x+3y-bx-by=3(x+y)-b(x+y)=(x+y)(3-b)$$

$$x^7-x^3-4x^4+4=x^3(x^4-1)-4(x^4-1)=(x^4-1)(x^3-4)$$

$$a^2b^2(a+1)-a(a+1)=(a+1)(a^2b^2-a)$$

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

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