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

$deg(a^5b)=6$

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

$x^3-y^3= x^3-y^3+ xy^2 - xy^2 + yx^2-yx^2 = x^3+xy^2+yx^2 - y^3-xy^2-yx^2 =$
$=x(x^2+y^2+yx) - y(y^2+xy+x^2) = (x^2+y^2+yx)(x-y)$

$x^3+y^3=x^3+y^3+ xy^2 - xy^2 + yx^2-yx^2= x^3+xy^2-yx^2 + y^3-xy^2+yx^2 =$
$=x(x^2+y^2-yx) + y(y^2-xy+x^2) = (y^2-xy+x^2)(x+y)$

$x^5 - y^5= x^5 - y^5 + xy^4-xy^4 + yx^4-yx^4 = x^5+xy^4-yx^4 - y^5-xy^4+yx^4 =$
$x(x^4+y^4-yx^3) -y(y^4+xy^3-x^4)$

$x^5-y^5 = x^5-y^5+xy^4-xy^4 + yx^4-yx^4 \ \underline{+y^2x^3 - y^2x^3 +x^2y^3 - x^2y^3}= x^5+xy^4+yx^4+y^2x^3 +x^2y^3$
$-y^5-xy^4-yx^4 - y^2x^3- x^2y^3= x(x^4+y^4+yx^3+y^2x^2+xy^3) - y(y^4+xy^3+x^4+yx^3+x^2y^2)$
$=(y^4+xy^3+x^4+yx^3+x^2y^2)\ (x-y)$

$x^5-y^5 = x^5-y^5+xy^4-xy^4 + yx^4-yx^4 = x^5-yx^4 \ -y^5 \ +xy^4+ yx^4-xy^4 = x^4(x-y) +y^4(-y+x) +yx(x^3-y^3)=$
$=x^4(x-y) +y^4(-y+x) \ +yx(x^2+y^2+yx)(x-y)= (x-y)(x^4+y^4+yx(x^2+y^2+yx))=$
$= (x-y)(x^4+y^4+yx*x^2+yx*y^2+yx*yx) = (x-y)(x^4+y^4+yx^3+xy^3+x^2y^2)$

$x^5+y^5 = x^5+y^5+xy^4-xy^4+yx^4-yx^4+y^2x^3 - y^2x^3 +x^2y^3 - x^2y^3 =$
$x^5+xy^4+yx^4-y^2x^3-x^2y^3 + y^5-xy^4-yx^4+y^2x^3+x^2y^3 = x(x^4+y^4+yx^3-y^2x^2-xy^3) +$
$y(y^4-xy^3+yx^3+x^2y^2)$

$x^5+y^5+xy^4-xy^4+yx^4-yx^4+y^2x^3 - y^2x^3 +x^2y^3 - x^2y^3 =x^5-yx^4+y^2x^3 -x^2y^3+xy^4$
$+y^5-xy^4+yx^4 - y^2x^3 +x^2y^3= x(x^4-yx^3+y^2x^2-xy^3+y^4) + y(y^4-xy^3+x^4-yx^3+x^2y^2) =$
$(x^4-yx^3+y^2x^2-xy^3+y^4)(x+y)$

5 штук
179
лицей 2
1543
57
интеллектуал

МФТИ
МГУ
ВШЭ
СПбгу
ИТМО