

- a)  $(x-1)(x^2+x+1) - (1+x)(1-x+x^2)$ ;  
 б)  $(a^2-3)(a^4+3a^2+9) + a^4(1-a)(1+a)$ ;  
 в)  $2p^2(2-p)(p^2+2p+4) - 4(p-5)(5+p)$ ;  
 г)  $n^5(2+n^2)(n^2-2) - (m-n^3)(m^2+mn^3+n^6)$ .

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

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

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

$$(x-1)(x^2+x+1^2)-(1+x)(1^2-x+x^2) = x^3-1^3 - (1^3+x^3) \\ = x^3-1^3-1^3-x^3 = -2$$

$$(a^2-3)((a^2)^2+3a^2+3^2)+a^4(1-a)(1+a) = \\ (a^2)^3-3^3+a^4(1^2-a^2) = a^6-27+a^4*1^2-a^4*a^2 = \\ a^6-27+a^4-a^6 = -27+a^4$$

$$2p^2(2-p)(p^2+2p+2^2)-4(p-5)(p+5) = \\ 2p^2(2^3-p^3)-4(p^2-5^2) = \\ 2p^2*2^3-2p^2*p^3-4*p^2+4*5^2 = \\ 16p^2-2p^5-4p^2+100 = 12p^2-2p^5+100$$

$$n^9+n^9=2n^9 \\ (n^9)^2=n^{18} \\ n^9*n^9=n^{18} \\ n^9 + n^3 = ?$$

$$n^5(n^2+2)(n^2-2)-(m-n^3)(m^2+mn^3+(n^3)^2) = \\ n^5((n^2)^2-2^2)-(m^3-(n^3)^3) = n^5(n^4-4)-(m^3-n^9) \\ = n^5*n^4-n^5*4-m^3+n^9 = \\ n^9-4n^5-m^3+n^9 = 2n^9-4n^5-m^3$$