

а) $x^3 + 8$;

б) $27 + a^3$;

в) $1 + m^6$;

г) $p^9 + 64$;

д) $x^6 + 8y^3$;

е) $a^9 + 27b^3$;

ж) $8m^6 + n^9$;

з) $64p^9 + q^{12}$;

и) $\frac{1}{8} + x^6y^9$.

$$x^3+8=x^3+2^3=(x+2)(x^2-x2+2^2)=(x+2)(x^2-2x+4)$$

$$27+a^3=3^3+a^3=(3+a)(3^2-3a+a^2)=(3+a)(9-3a+a^2)$$

$$1+m^6=1^3+(m^2)^3=(1+m^2)(1^2-1m^2+(m^2)^2)=(1+m^2)(1-m^2+m^4)$$

$$p^9+64=(p^3)^3+4^3=(p^3+4)((p^3)^2-4p^3+4^2)=(p^3+4)(p^6-4p^3+16)$$

$$x^6+8y^3=(x^2)^3+2^3y^3=(x^2)^3+(2y)^3=(x^2+2y)((x^2)^2-2yx^2+(2y)^2)=(x^2+2y)(x^4-2yx^2+4y^2)$$

$$a^9+27b^3=(a^3)^3+3^3b^3=(a^3)^3+(3b)^3=(a^3+3b)((a^3)^2-3ba^3+(3b)^2)=(a^3+3b)(a^6-3ba^3+9b^2)$$

$$8m^6+n^9=2^3(m^2)^3+(n^3)^3=(2m^2)^3+(n^3)^3$$

$$=(2m^2+n^3)((2m^2)^2-2m^2n^3+(n^3)^2)=(2m^2+n^3)(4m^4-2m^2n^3+n^6)$$

$$64p^9+q^{12}=4^3(p^3)^3+(q^4)^3=(4p^3)^3+(q^4)^3=(4p^3+q^4)((4p^3)^2-4p^3q^4+(q^4)^2)=$$

$$(4p^3+q^4)(16p^6-4p^3q^4+q^8)$$

$$1/8+x^6y^9=1/2^3+(x^2)^3(y^3)^3=1/2^3+(x^2y^3)^3=(1/2+x^2y^3)(1/2^2-1/2x^2y^3+(x^2y^3)^2)=$$

$$(1/2+x^2y^3)(1/4-1/2x^2y^3+x^4y^6)$$