

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)  $\frac{1}{8} + x^6y^9$ .

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

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

3)  $8m^6 + n^9 = (2m^2)^3 + (n^3)^3 = (2m^2 + n^3)((2m^2)^2 - 2m^2n^3 + (n^3)^2) = (2m^2 + n^3)(4m^4 - 2m^2n^3 + n^6)$

4)  $27 + a^3 = 3^3 + a^3 = (3+a)(9 - 3a + a^2)$

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

6)  $64p^9 + q^{12} = (4p)^3 + (q^4)^3 = (4p + q^4)((4p)^2 - 4pq^4 + (q^4)^2) = (4p + q^4)(16p^2 - 4pq^4 + q^8)$

7)  $1 + m^6 = (1 + m^2)(1 - 1m^2 + m^4)$

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

9)  $\frac{1}{8} + x^6y^9 = (\frac{1}{2})^3 + (x^2y^3)^3 = (\frac{1}{2} + x^2y^3)((\frac{1}{2})^2 - \frac{1}{2}x^2y^3 + (x^2y^3)^2) = (\frac{1}{2} + x^2y^3)(\frac{1}{4} - \frac{1}{2}x^2y^3 + x^4y^6)$