

Correct. A binomial in the form $a^3 - b^3$ can be factored as $(a - b)(a^2 + ab + b^2)$.

$$\begin{aligned} 64x^9 - 27y^6 &= (4x^3)^3 - (3y^2)^3 = (4x^3 - 3y^2) \left((4x^3)^2 + 4x^3 \cdot 3y^2 + (3y^2)^2 \right) \\ &= (4x^3 - 3y^2) (16x^6 + 12x^3y^2 + 9y^4) \end{aligned}$$

The missing exponent is 4.