

Đề bài: Tính:

a) $(2x^2 + 3y)^3$; b) $(\frac{1}{2}x - 3)^3$

Lời giải đáp án:

$$\begin{aligned} \text{a) } (2x^2 + 3y)^3 &= (2x^2)^3 + 3(2x^2)^2 \cdot 3y + 3 \cdot 2x^2 \cdot (3y)^2 + (3y)^3 \\ &= 8x^6 + 3 \cdot 4x^4 \cdot 3y + 3 \cdot 2x^2 \cdot 9y^2 + 27y^3 \\ &= 8x^6 + 36x^4y + 54x^2y^2 + 27y^3 \end{aligned}$$

$$\begin{aligned} \text{b) } (\frac{1}{2}x - 3)^3 &= (\frac{1}{2}x)^3 - 3(\frac{1}{2}x)^2 \cdot 3 + 3(\frac{1}{2}x) \cdot 3^2 - 3^3 \\ &= \frac{1}{8}x^3 - 3 \cdot \frac{1}{4}x^2 \cdot 3 + 3 \cdot \frac{1}{2}x \cdot 9 - 27 \\ &= \frac{1}{8}x^3 - \frac{9}{4}x^2 + \frac{27}{2}x - 27 \end{aligned}$$