

$$* \quad (-6x^2 - 5x)(2x^3 - 8x + 3)$$

$$\begin{aligned} & -6x^2(2x^3) - 6x^2(-8x) - 6x^2(3) \\ & - 5x(2x^3) - 5x(-8x) - 5x(3) \end{aligned}$$

$$-12x^5 + 48x^3 - 18x^2 - 10x^4 + 40x^2 - 15x$$

$$-12x^5 - 10x^4 + 48x^3 + 22x^2 - 15x$$