

$$* (3x^4 - 2x^2 + x - 6) - (-2x^5 + 8x^4 + x^3 - 2x^2 + 9)$$

$$\underline{3x^4} - \underline{2x^2} + x \textcircled{-6} + 2x^5 - \underline{8x^4} - x^3 + \underline{2x^2} \textcircled{-9}$$

$$\underline{3x^4 - 8x^4} \quad \underline{-2x^2 + 2x^2} \quad \underline{-6 - 9} + x + 2x^5 - x^3$$

$$-5x^4 - 15 + x + 2x^5 - x^3$$

$$\rightarrow 2x^5 - 5x^4 - x^3 + x - 15$$

$$3x^4 \quad -2x^2 + x - 6$$

$$2x^5 - 8x^4 - x^3 + 2x^2 \quad -9$$

$$\rightarrow 2x^5 - 5x^4 - x^3 + x - 15$$