

3.7 Multiplying Polynomials

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Use distributive property to multiply 2 polynomials

Ex. #1

$$\begin{aligned} \text{(a.) } & (3K + 4)(K^2 - 2K - 7) \\ & = 3K^3 - 6K^2 - 21K + 4K^2 - 8K - 28 \\ & = \boxed{3K^3 - 2K^2 - 29K - 28} \end{aligned}$$

K^2
 K^3
 K

Expand and simplify

$$\begin{aligned} \text{(a.) } & (4K - 3m)^2 \\ & = (4K - 3m)(4K - 3m) \\ & = 16K^2 - 12Km - 12Km + 9m^2 \\ & = \boxed{16K^2 - 24Km + 9m^2} \end{aligned}$$

$$\begin{aligned} \text{(b.) } & (2v - 5w)(3v + 2w - 7) \\ & = 6v^2 + 4vw - 14v - 15vw - 10w^2 + 35w \\ & = \boxed{6v^2 - 11vw - 14v - 10w^2 + 35w} \end{aligned}$$