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$$\begin{aligned}A &= 3x - 4(x + 3) + (x + 3)^2 \\ &= 3x - 4x - 12 + x^2 + 2 \times x \times 3 + 3^2 \\ &= 3x - 4x - 12 + x^2 + 6x + 9 \\ &= x^2 + 5x - 3\end{aligned}$$

$$\begin{aligned}B &= 5 - 2x(x - 2) + (x + 5)(x - 5) \\ &= 5 - 2x^2 + 4x + x^2 - 5^2 \\ &= 5 - 2x^2 + 4x + x^2 - 25 \\ &= -x^2 + 4x - 20\end{aligned}$$