

You may have reversed the order of the functions when subtracting.

$$(h - g)(x) = h(x) - g(x) = -4x^2 + 6x + 2 - (10x^3 - 8x - 9)$$

$$= -4x^2 + 6x + 2 - 10x^3 + 8x + 9 = -10x^3 - 4x^2 + 6x + 8x + 2 + 9$$

$$= -10x^3 - 4x^2 + 14x + 11$$