You may have thought that the notation $(f+g)(x)$ meant that you had to do some multiplication, but it does not. The notation should be interpreted as follows:

$$(f+g)(x) = f(x)+g(x) = \left(7x^2 - 3x - 4\right) + \left(-9x^2 + 6x - 5\right)$$

Then rearrange and combine like terms. The correct answer is $-2x^2 + 3x - 9$.