

It appears that you multiplied exponents while finding the product of the two functions. When multiplying terms with the same base, multiply the coefficients and add the exponents. Start with:

$$(f \cdot g)(x) = f(x) \cdot g(x) = (-2x^2)(7x^2 - 2x - 5)$$

Use the distributive property. The correct answer is $-14x^4 + 4x^3 + 10x^2$.