

**Operations on Functions: Adding and Subtracting Functions**

1

If $f(x) = 2x^3 + 5x^2 - 9$ and $g(x) = x^2 - 2x + 3$, find $(f - g)(x)$.

A $2x^3 + 4x^2 + 2x - 12$

B $2x^3 + 4x^2 - 2x + 12$

C $2x^3 - 4x^2 + 2x - 12$

D $2x^3 - 4x^2 - 2x - 12$

2

Find $(f - g)(x)$ if $f(x) = x^3 + 9x - 2$ and $g(x) = 3x^3 + 4x^2 + 1$.

A $4x^3 + 4x^2 + 9x - 1$

B $-2x^3 + 5x - 3$

C $2x^3 + 4x^2 - 9x + 3$

D $-2x^3 - 4x^2 + 9x - 3$

3

What is $(f - g)(x)$ if $f(x) = 5x^2 + 8x - 5$ and $g(x) = 2x^2 - 7$?

$(f - g)(x) =$

A) $3x^2 + 8x + 2$

B) $7x^2 + 8x - 12$

C) $-3x^2 - 8x - 2$

D) $3x^2 + x - 5$