

Operations on Functions

Grade 12 General

Answer the following questions:

1. Given $f(x) = 3x^2 + 7x$ and $g(x) = 2x^2 - x - 1$, find $(f + g)(x)$.

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|---------------------------------------|---|
| ☐ $11x^2 - 1$ | ☐ $5x^4 + 6x^2 - 1$ |
| ☐ $5x^2 + 6x - 1$ | ☐ $5x^2 + 8x - 1$ |

2. Given $f(x) = 3x^2 + 7x$ and $g(x) = 2x^2 - x - 1$, find $(f - g)(x)$.

- | | |
|---------------------------------------|--------------------------------------|
| ☐ $x^2 + 8x + 1$ | ☐ $x^2 + 6x - 1$ |
| ☐ $5x^2 + 8x - 1$ | ☐ $x^2 + 8x - 1$ |

5. Given $g(x) = 6x + 4$ and $f(x) = 2x - 7$
Find $(fg)(x)$

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|------------------------------------|--|
| ☐ $8x - 3$ | ☐ $4x + 11$ |
| ☐ $12x^2 - 28$ | ☐ $12x^2 - 34x - 28$ |

6. Given $g(x) = 6x + 4$ and $f(x) = 2x - 7$,
find $g(x) - f(x)$

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|--------------------------------|----------------------------------|
| ☐ $4x - 3$ | ☐ $4x + 11$ |
| ☐ $8x - 3$ | ☐ $-4x - 11$ |