Name _____   Date _____
Mr. Schlansky   Algebra II

Performing Operations with Functions

Express each of the following in polynomial standard form

1. Given $f(x) = 3x^2 - 5x + 1$ and $g(x) = x + 1$.
Express $[g(x)]^2 - 2f(x)$

2. Given $p(x) = x^2 + 2x - 3$ and $g(x) = 2x - 3$.
Express $[p(x)][g(x)] - 3p(x)$

3. Given $f(x) = 2x^2 + 4x - 2$ and $g(x) = x - 2$.
Express $f(x) - [g(x)]^3$

4. For $c(x) = 3x^2 - 4x + 7$ and $d(x) = x - 2$, determine $c(x) \bullet d(x) - [d(x)]^3$ as a polynomial in standard form.

5. Given $f(x) = 5x^2 + 3x - 12$ and $g(x) = 2x - 1$.
Express $4g(x) - f(x + 1)$

6. Given $m(x) = 2x^2 + 2x - 7$ and $n(x) = x - 5$.
Express $3n(x) - m(x - 2)$

7. Given $f(x) = x^2 - 2x + 3$ and $g(x) = 4x + 1$.
Express $2f(x - 1) - [f(x)][g(x)]$

8. Given $f(x) = 2x^2 - 3x + 1$ and $g(x) = x - 3$.
Express $[g(x)]^3 - f(x - 3)$