

Polynomial Functions, Graphs, and Compositions - Homework

Evaluate the functions.

1. $f(x) = 5x^2 - 2$ <i>find</i> $f(3)$	2. $f(x) = x^2 + 8x - 1$ <i>find</i> $f(-2)$
3. $f(x) = 2x^2 - x - 2$ <i>find</i> $f(-4)$	4. $f(x) = x^2 - 7x + 1$ <i>find</i> $f(5)$

For the following functions, find $(f + g)(x)$ and $(f - g)(x)$

5. $f(x) = x^2 + 8x - 3$ $g(x) = x^2 - 7x + 5$	6. $f(x) = 3x^2 - 4x$ $g(x) = x^2 + x - 7$
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For the following functions, find $(f + g)(-2)$ and $(f - g)(5)$

7. $f(x) = 3x^2 - x + 2$ $g(x) = 4x^2 + 2x - 1$	8. $f(x) = 7x^2 - 2x + 1$ $g(x) = x^2 - x - 1$
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9. Given $f(x) = x^2 - 3x$ and $g(x) = x - 2$ find the following:

- a) $(f \circ g)(x)$
- b) $(g \circ f)(x)$
- c) $(f \circ g)(-2)$
- d) $(g \circ f)(3)$

10. Given $f(x) = 6x + 5$ and $g(x) = 2x - 1$ find the following:

- a) $(f \circ g)(x)$
- b) $(g \circ f)(x)$
- c) $(f \circ g)(-2)$
- d) $(g \circ f)(3)$