Polynomial Functions, Graphs, and Composition

1. For the following polynomial function, find f(-3) and f(2)

$$f(x) = x^2 - 2x + 4$$

2. For the following polynomial function, find f(-3) and f(2)

$$f(x) = -5x^2 - x + 1$$

3. For the following functions, find (f + g)(x) and (f – g)(x)

$$f(x) = x^2 - 7x + 3$$
$$g(x) = 3x^2 - x + 5$$

4. Given $f(x) = x^2 + 11x - 1$ and $g(x) = 3x - 5$, find the following

$$a)\ (f+g)(-3)$$
$$b)\ (f-g)(2)$$

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

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

6. Given f(x) = 9x + 3
and g(x) = 4x - 8, find the following

$$a)\ (f \circ g)(x)$$

$$b)\ (g \circ f)(x)$$

$$c)\ (f \circ g)(2)$$