Functions: Operations and Compositions

Algebra 2

For 1 - 2, evaluate the following functions for c(2), c(-1), c(2x), and c(x + 2).

1) $c(x) = x^2 - 3x + 8$

2) $c(x) = -x^2 + x + 9$

For 3 - 6, use $f(x) = 4x + 1$ and $g(x) = x + 3$.

3) Find $(f + g)(x)$

4) Find $(f - g)(x)$

5) Find $(f \bullet g)(x)$

6) Find $\left(\frac{f}{g}\right)(x)$

For 7 - 10, use $p(x) = 3x^2 + 7x$ and $q(x) = 3x - 2$.

7) Find $(p + q)(x)$

8) Find $(p - q)(x)$

9) Find $(p \bullet q)(x)$

10) Find $\left(\frac{p}{q}\right)(x)$

For 11 - 14, use $t(x) = x^2 - 4$ and $v(x) = x - 2$.

11) Find $(t + v)(x)$

12) Find $(t - v)(x)$

13) Find $(t \bullet v)(x)$

14) Find $\left(\frac{t}{v}\right)(x)$

For 15 - 22, use $f(x) = 3x$, $g(x) = x + 3$, $j(x) = x^2$, and $k(x) = x^2 - 2x$.

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

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

17) $(f \circ j)(x)$

18) $(k \circ g)(x)$

19) $(f \circ g)(1)$

20) $(f \circ k)(3)$

21) $(g \circ j)(-1)$

22) $(k \circ f)(-2)$