

Functions Operations & Compositions WS

Using the following functions, complete the function operations listed below.

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

a. $(f + g)(x)$

b. $(g - f)(x)$

c. $(f \cdot g)(x)$

d. $(f \div g)(x)$

e. $(f \circ g)(x)$

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

2. $f(x) = x^2 + 3x - 10$ and $g(x) = x - 2$

a. $(f + g)(x)$

b. $(f - g)(x)$

c. $(f \cdot g)(x)$

d. $\left(\frac{f}{g}\right)(x)$

e. $(f \circ g)(x)$

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

g. $g(g(x))$

h. $(g \div f)(x)$

3. $f(x) = -6x$ and $g(x) = 3x^2$

a. $(g + f)(x)$

b. $(g - f)(x)$

c. $(g \cdot f)(x)$

d. $(f \div g)(x)$

e. $(f \circ g)(x)$

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

g. $f(f(x))$

h. $\left(\frac{g}{f}\right)(x)$