1- Let $f(x) = \frac{1}{\sqrt{x+2}}$ and $g(x) = 2x + 1$, then find:

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

b. $(f \cdot g)(2)$.

c. $\left(\frac{f}{g}\right)(1)$.

d. $(f - g)(0)$.

2- Let $f(x) = \frac{1}{2}x$ and $g(x) = 5 - x^2$, then evaluate $g \circ f(4a)$.

3- Let $f(x) = \frac{x^2}{x+1}$ and $g(x) = \frac{2x}{x^2-1}$, then:

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

b. Find the domain of $(f + g)(x)$.

4- Let $f(x) = x^2 + x$ and $g(x) = \sqrt{x + 2}$, then:

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

b. Find the domain of $f \circ g(x)$.

5- Let $f(x) = \frac{1}{x^2}$ and $g(x) = \frac{1}{2x-1}$, then:

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

b. Find the domain of $g \circ f(x)$.

6- If $H(x) = f \circ g(x)$ and $H(x) = \frac{5}{7-2x} + (10x + 6)^2 - 11$ and $g(x) = 2x$, then find $f(x)$.