

H.W:

1. $f(x) = x^2 + 2x + 3$, $g(x) = \frac{1}{x}$

$$h(x) = f(x) + g(x) = x^2 + 2x + 3 + \frac{1}{x} \text{ Then } D_h = ?$$

2. $f(x) = \sqrt{2-x}$, $g(x) = \sqrt{x-5}$, $h(x) = g(x) + f(x)$

Is it a function or not?

3. $f(x) = \frac{1}{x^2-4}$, $D_f = ?$ and $R_f = ?$

4. Find the domain and range of $f(x) = |x-1| + |x-3|$

5. Find the domain and range of $f(x) = \frac{4x-3}{x^2+1}$

6. Find the domain and range of $f(x) = \ln\left(\frac{4+x}{4-x}\right)$