1. Find the domain of $f(x) = \frac{x}{3-x}$

2. Find the domain of $f(x) = 7x + 4$

3. Suppose $f(x) = 7x + 4$ and $g(x) = \frac{2}{x-6}$. Find $(f+g)(x)$, $(f+g)(8)$, and the domain of $f+g$.

4. Suppose $f(x) = x^2 + 4x$ and $g(x) = 2 - x$.

a) $(fg)(-3) =$

b) $\left(\frac{f}{g}\right)(0) =$

c) $(f-g)(x) =$

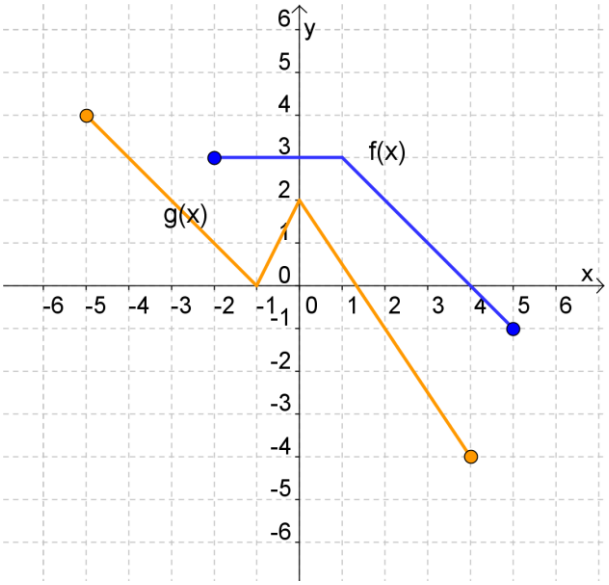
d) $(f-g)(6) =$

e) The domain of $f+g$ is _____.

f) The domain of $\frac{f}{g}$ is _____.

5. Let $f(x) = \frac{9x}{x-4}$ and $g(x) = \frac{7}{x+8}$. Find the domain of fg.

6. Find each of the following for the graph below.



a) $(f+g)(2)$

b) $(g-f)(-2)$

c) $(fg)(-3)$

d) $\left(\frac{g}{f}\right)(0)$

e) The domain of $f(x)$.

f) The domain of $g(x)$.

g) The domain of $f+g$.

Here's something my mom e-mailed me:
7H15 M355AG3 53RV35 70 PROV3 HOW OUR MIND5 C4N DO 4M4ZING 7HINGS! 1N 7H3 B3G1NN1ING 17 WA5 H4RD BU7 NOW, ON 7H1S LIN3, YOUR M1ND 1S R34DIN 17 4U7OM471C4LLY, W17H OU7 3V3N 7HINKING 4BOU7 17.