Name:

Math 115 Practice Quiz 1

1) Compute $(f \circ g)(x)$ if $f(x) = \dfrac{3x - 1}{x^2 + 7}$ and $g(x) = \cos(x)$.

2) Find the domain of the function $f(x) = \sqrt{1 - 4x}$.

3) If $f(x) = 7x^2 + 4x - 1$, evaluate and simplify the expression

$$\frac{f(3+h) - f(3)}{h}.$$

4) The area of a rectangle is 25 meters squared. Express the perimeter of the rectangle as a function of only one of its sides (this means write the perimeter as either a function of length or width, but not both).