Math 1A Calculus Fall, 2004
Prof. Haiman

Quiz 1 Solution (Version A)

Name _____

Consider the function

$$f(x) = \sqrt{2x+6}.$$

(a) What are the domain and range of f?

(b) Find a formula for the inverse function f^{-1}.

(c) What are the domain and range of f^{-1}?

(a) The domain of f is $[-3, \infty)$. The range is $[0, \infty)$.

(b) $f^{-1}(x) = (x^2 - 6)/2$

(c) The inverse function f^{-1} has domain $[0, \infty)$ and range $[-3, \infty)$. Note that the domain and range of f^{-1} are the range and domain of f, respectively. This is true even though the formula for f^{-1} appears to be defined for all real numbers x.