Calculus I Name:_____
TA/classroom:_____ Student ID:_____

Quiz 1

Oct. 3, 2007

1. (5 pts) Which of the following pairs of functions are inverse functions of each other on the implied domains?

   A) $f(x) = |x|$, $g(x) = |x|$ B) $f(x) = \frac{1}{x}$, $g(x) = \frac{x}{1}$,
   C) $f(x) = \frac{1}{x}$, $g(x) = \frac{1}{x}$, D) $f(x) = \sqrt{x}$, $g(x) = x^2$.
   Ans: C

2. (5 pts) Which one of the lines below is parallel(平行) to the line $y - 4 = 2(x - 7)$?

   A) $2x + y = -4$, B) $2x - y = 7$
   C) $-x - 2y = 1$, D) $-x + 2y = 2$

   Ans: B

3. (10 pts) Find the composition $f \circ g$ and identify the domain.
   $f(x) = x^2 - 2$, $g(x) = \sqrt{x - 1}$
   Note: You don't have to simplify the answer.

   $f(g(x))$=$\underline{(\sqrt{x-1})^2 - 2 = x - 3}$;

   Domain= $\underline{\quad x \geq 1}$