Math Xa Fall 2003
Worksheet: Infinite Limits
October 27, 2003

Let $f(x) = \dfrac{1}{(x-1)^2}$, $g(x) = \dfrac{-1}{(x-1)^2}$, and $h(x) = \dfrac{1}{x-1}$.

1. Complete the following table.

x	$f(x)$	$g(x)$	$h(x)$
.9			
.99			
.999			
1.001			
1.01			
1.1			

2. Based on the above table, determine which graph below belongs to the following functions.

   (a) f

   (b) g

   (c) h

3. Determine the following limits.

   (a) $\lim_{x \to 1} f(x)$

   (b) $\lim_{x \to 1} g(x)$

   (c) $\lim_{x \to 1} h(x)$

Graph A

Graph B

Graph C