

21-120 Differential and Integral Calculus, Summer II, 2004

QUIZ 1 7/2/04

Name : \_\_\_\_\_

1.

$$\lim_{x \rightarrow 1} \frac{x - 1}{x^2 - 5x - 6}$$

Note that the function

$$f(x) = \frac{x - 1}{x^2 - 5x - 6}$$

is defined and is continuous at  $x = 1$ , so the limit is equal to  $f(1) = \frac{0}{-10} = 0$ .

2.

$$\lim_{x \rightarrow 6} \frac{17}{(x - 6)^2}$$

Note that

$$\lim_{x \rightarrow 6^-} \frac{17}{(x - 6)^2} = \infty$$

and also

$$\lim_{x \rightarrow 6^+} \frac{17}{(x - 6)^2} = \infty$$

so we have that

$$\lim_{x \rightarrow 6} \frac{17}{(x - 6)^2} = \infty$$