

MATH 101-1901-Sec 08

**Quiz # 02**

Name:

ID:

Note: No credit for answers with out justification.

1. Find the domain of continuity of the following function. Also find the type of discontinuity, if any.

$$f(x) = \frac{2x^2 - 5x - 3}{x - 3}$$

2. Find the derivative by using the definition of derivative. Also find the domain of  $f$  and  $f'$ .

$$f(x) = \sqrt{x - 9}$$

3. Find the horizontal asymptotes of the following function, if they exist.

$$f(x) = x + \sqrt{x^2 + 5x}$$