Name and surname:

U number:

Calculus I - MAC 2311 - Section 007

Quiz 2

09/19/2017

1) [3 points] Give the definition of a function $f : \mathbb{R} \mapsto \mathbb{R}$ which is continuous at a point a in $\mathbb{R}$.

2) [3 points] Let $f : \mathbb{R} \mapsto \mathbb{R}$ be a function and a a point such that

$$\lim_{x \to a^+} f(x) = \lim_{x \to a^-} f(x) = L < \infty \text{ and } f(a) \neq L.$$

How do we call this kind of discontinuity?

Find a function g that agrees with f for all $x \neq a$ and is continuous at a.

3) [5 points] For which values of x is the following function continuous? For each discontinuity establish if it is a removable, an infinite or a jump discontinuity.

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