Quiz 2A-T1
MATH 131
Spring 2017
Sections 2.5-2.6

Show all work for full credit. ***Good luck!***

1. For what value of the constant *c* is the function *f* continuous on $(-\infty, \infty)$?

$$f(x) = \begin{cases} cx^2 - 2x & if \quad x < 3 \\ x^3 + cx & if \quad x \geq 3 \end{cases}$$

2. Find horizontal asymptotes of the following curve.

$$y = \frac{x^3 - x}{x^2 - 6x - 7}$$

3. Find the limit or show that it does not exist.

$$\lim_{x\to\infty} \frac{\sqrt{x+3x^2}}{4x-1}$$