

MATH 131, Fall 2019

Name: _____

Quiz 11

12/05/19

Section: _____

For full credit you must present a clearly organized solution, showing all supporting calculations.

1. Let

$$f(x) = 6x^5 - \frac{1}{x} + \frac{1}{x^2} - \frac{1}{3\sqrt[3]{x^2}} + \frac{3}{1+x^2}.$$

Find a general antiderivative $F(x)$ of $f(x)$, valid wherever $f(x)$ is continuous.

2. Find the solution $f(x)$ of the following initial value problem: $f''(x) = e^x - \cos x$, $f'(0) = e$, $f(0) = 1$.