

Math 105 Quiz 3

§2.1-§2.2

Name:

Show all work for credit.

1. Find the derivative of $f(x) = \sqrt{x-2}$ using the formal definition of the derivative.

$$\text{Use } f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}.$$

2. Use the sum/difference, constant multiple, and power rules to evaluate the following.

(a) $\frac{d}{dx}(3\sqrt{x} - \pi + \frac{2}{x^4} - 4x^7 + x^{3/5})$

- (b) Simplify the function before finding the derivative.

$$\left(\frac{(x-1)(x-2)}{x} \right)'$$

3. If you haven't done so already, use your algebra skills to rewrite your answers from 2.(a) and 2.(b) so that there are no negative exponents or fraction exponents.

2(a)

2(b)