Quiz 1: Inverse Functions and Exponentials

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Math 141, Section FC02

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Name: _____

1. Consider the following function:

$$f(x) = \frac{2x+1}{x-4}$$

a. (4 points) Find $f^{-1}(x)$.

b. (3 points) Find $(f^{-1})'(-\frac{1}{4})$ using the inverse function theorem. (Note: If you answer this question without using the inverse function theorem, you will only get 1 point for this question.)

2. (3 points) Find the derivative of the following function:

$$f(x) = (2t)^{\ln t}$$