

Math 2250 Quiz 3

Name _____ Section _____

Points will be deducted for untidy or disorganized answers

1. (5 points) Show that

$$f(x) = \frac{x - 5 + \frac{6}{x}}{x - 3 + \frac{2}{x}}, \quad x \neq 0, 1, 2$$

has a continuous extension to $x = 0$ and $x = 2$, and find that extension.

In other words, show that f has a removable discontinuity at $x = 0$ and $x = 2$ and find the value that we should assign to $f(0)$ and $f(2)$ so that f is continuous at those points.

What is the nature of the discontinuity at $x = 1$?