

EXAM 1 BONUS

MATH 130

Due Thursday, October 13, 3:00PM

Your Name (Print): _____

You may use your book and your notes to do this assignment. You may also consult Prof. King or Dave Brown. However, you may NOT use other student's notes or exams, and you may not consult other students, tutors, professors or resources of any kind. Failure to follow these guidelines could result in a trial by the Committee on Standards.

In order to receive any points, you MUST complete the first problem, however, you need not complete the second. You must turn in your original exam with your bonus. Please do not write on your original exam.

YOU MUST SHOW ALL WORK TO RECEIVE CREDIT. Simplify your answers so that you have gathered all like terms, cancelled where possible, and so that there are no negative exponents or fractions within fractions in your final answer. **You can earn an additional bonus point if your work is very neat and organized!**

(5 pts) 1. Look through your exam and figure out for which problem you missed the most points. Rework that problem here. (If you missed the same number of points for more than one problem, you may choose which problem to redo. Consider each part of problem 1 a separate question, but all other problems with parts as one problem.)

(5 pts) 2. Let $f(x) = \frac{x^2 + 3x - 10}{x - a}$.

(a) For what values of a , if any, does $\lim_{x \rightarrow a^+} f(x)$ equal a finite number?

(b) For what values of a , if any, does $\lim_{x \rightarrow a^+} f(x) = \infty$?

(c) For what values of a , if any, does $\lim_{x \rightarrow a^+} f(x) = -\infty$?

Justify your answers clearly and completely. Using definitions and theorems is a good idea!