

## Math 180, Quiz 8: Thursday, March 21, 2013

Take fifteen minutes to complete this quiz. Please show all your work, and write your name on the front *and* back of the paper before turning it in. Make sure to show all relevant work.

1. (**9 pts**) Sketch a graph of the function  $f(x) = \frac{x^2 + 5}{x + 2}$ . In particular:

- Make sure your sketch is increasing and decreasing in the right places and has the appropriate concavity and end behavior.
- Indicate any critical and/or inflection points on the graph, including their coordinates.
- Indicate any asymptotes with dashed lines.
- Write down all calculations needed to establish the features above.

(They probably won't give you this checklist on the exam, but I thought I'd be nice and add it here.)

2. (**1 pt**) Find the absolute extrema of the function  $f(x)$  above on the interval  $[-1, 2]$ .