

## 236 Quiz 1

January 20, 2011.

Name \_\_\_\_\_

By printing my name I pledge to uphold the Honor Code.

*Work individually. You may use your Notebooks but no loose papers, printouts, photocopies, books, calculators, cell phones, or other resources.*

1. Express the punctured interval of radius 4 around 2 four ways:

- a) as a picture on the real number line:
- b) using interval notation:
- c) in words, using the concept of distance:
- d) with a double inequality involving an absolute value:

2. Consider the expression  $\frac{x^2 - x}{3x^2 - x - 2}$ .

- a) For which values of  $x$  is this expression equal to 0?
- b) For which values of  $x$  is this expression undefined?

3. Solve the inequality  $\frac{x(x+1)}{x^2-4} \leq 0$ . Show your work clearly and put your final answer in interval notation with a box around it.