Quiz 8

Show all your work. Reasonable supporting work must be shown for any partial credit.

 [3] Write out the form of the partial fraction decomposition of the function (as done in WebHW7-4#1-3). You do not earn any extra marks for finding the numerical values of the coefficients.

$$\frac{x-20}{x^2+x-56}$$

- 2. For each of the following, identify the technique you would use to find the indefinite integral. For example, if you think substitution would work, write "substitution" and identify what u would be.
 - (a) [2] (Activity: Rational Functions)

$$\int \frac{2t}{3t^2 - 1} \, dt$$

(b) [2] (Activity: Rational Functions)

$$\int \frac{2}{x^2 + 1} \, dx$$

3. [3] (WrittenHW7-4#70) Consider the volume of the solid whose base is bounded by y = 0, x = 0, x = 1 and $f(x) = \frac{1}{x^2 + 3x + 2}$. The cross sections perpendicular to the *x*-axis form squares. Set up the definite integral that would find the volume. Note that *f* is graphed on the right. Do *not* compute this!!!

