Due Monday, February 4 at start of class   Name: _____

Math 1520 – Quiz 3 – Take Home

This quiz should take you approximately 25 minutes. You may use your book, calculators, software, the internet, and any reference material, but do not work together and do not get help (except from Dr. Clair). Show work on all problems.

(10)   1. Let $L(x) = \int_2^x \frac{1}{\ln(t)}\, dt$.

     (a) Find $L(2)$.

     (b) Find $L'(2)$.

     (c) Find $L''(2)$.

(10)   2. Calculate $\int \frac{1}{x^2 + 6x + 10}\, dx$.

(10) 3. Find $\int x^2 e^x \, dx$.

(10) 4. Find the exact value of the definite integral $\int_2^3 \dfrac{dx}{x(\ln x)^2}$.

(10) 5. The graph of $f(x)$ is shown below. Estimate $\displaystyle\int_0^5 x f'(x)\, dx$.