Math 157 - Quiz 12

Name _____

November 30, 2016

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (3 points) Use the area concept to evaluate $\int_0^4 (-3x + 7)\, dx$.

2. (2 points) Use the Fundamental Theorem of Calculus to evaluate $\int_0^1 (4x + e^{2x})\, dx$.

3. (2 points) Use a right sum over 5 subintervals to approximate $\int_1^2 \ln x \, dx$. Then use `fnInt` to approximate the integral.

4. (3 points) If $f(x) \geq g(x)$ on $[a, b]$, then the area between the graphs of f and g over $[a, b]$ is given by $\int_a^b [f(x) - g(x)] \, dx$. Use this idea with the Fundmental Theorem of Calculus to determine the area between the graphs of $y = x^2$ and $y = x^3$ on the interval $[0, 1]$.