Section 004 of Calculus Lab 2, Quiz of February 21, 2003
10:00-10:15 a.m.

Name (clearly printed): _____

Student Identification Number: _____

For this quiz, you are to print the Input statement in **InputForm** (not **StandardForm**) for MATHEMATICA and the corresponding Output statement that MATHEMATICA gives in order to solve Problems 1 and 2 below.

As the first Input statement, write your Student Identification Number with a decimal point after it and set `id` equal to it. Thus, if your Student Identification Number were 123-45-6789, you would write and evaluate `id = 123456789.` as your first line of Input (with the decimal point). Then, your first Input and Output would look somewhat like

```
In[1]           id = 123456789.

Out[1]          id = 1.23456789 x 10^8
```

You may have fewer digits in the output and it may look like `id = +1.2345 x 10^8`.

Problem 1. Find a numerical approximation for the definite integral of the function

$$f(x) = e^{(-3x+57)} \left(x^2 + \ln x + \frac{id}{x^5} \right)$$

over the interval from $x = 19$ to $x = 31$.

Input:

Output:

Problem 2. Find a numerical approximation for the improper integral of the function

$$g(x) = \frac{x^7 + x^5 + id}{(x+2)^3 (x^4+1)^2}$$

over the interval $[5, \infty)$. (This improper integral does converge.)

Input:

Output:

(End of Quiz)