

Name :

Student ID :

Department :

Math 101, Calculus 1, Section 3
Quiz 6

1. a. Evaluate the following limit by using l'Hospital's Rule where appropriate.

$$\lim_{x \rightarrow -\infty} x \ln \left(1 - \frac{1}{x} \right)$$

If l'Hospital's Rule doesn't apply, explain why.

b. Evaluate the following integral using integration by parts with the indicated choices of u and v .

$$\int e^x \sin \pi x \, dx \tag{1}$$

[Exercises 46 and 22 on pages 512 and 528 of your textbook, respectively.]

Please present the solution using mathematical terminology in a clear and understandable manner. (Grading 5+5=10 points.)