Math 176 Quiz 7 Version A

1. Use the limit definition
$$e^x = \lim_{n \to \infty} \left(1 + \frac{x}{n}\right)^n$$
 to explain why $e^x e^y = e^{x+y}$.

2. Use the fact that $e^x e^y = e^{x+y}$ to explain why $\ln AB = \ln A + \ln B$.

3. Find A the accumulated amount if a principle P = 100000 is invested at an interest rate r = 8% per year for t = 3 years compounded quarterly.