Math 176 Quiz 7 Version A

1. Use the limit definition $e^{x}=\lim _{n \rightarrow \infty}\left(1+\frac{x}{n}\right)^{n}$ 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 $\ln A B=\ln A+\ln B$.
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.
