1. Find the Maclaurin series for $f(x) = \sin(x)$.

2. Use the Maclaurin series for $\sin(x)$ to find the Maclaurin series of $\cos(x)$.
   Hint: $\frac{d}{dx}\sin(x) = \cos(x)$

3. Find the Maclaurin series for $g(x) = e^x$.

4. Verify your series in #3 by taking the derivative.