For each function, find its derivative. Remember that you can verify your answer by graphing.

1. $e^{x} \sin (x)$
2. $\ln (x)\left(x^{3}-3\right)$
3. $\frac{x+\cos (x)}{x^{2}}$
4. $\tan (x)$

Hint: $\tan (x)=\frac{\sin (x)}{\cos (x)}$
5. $\frac{3 \ln (x)}{e^{x}}$

