Math 241: HW 2
Due on Friday, June 7
Summer ’13

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Problem 1

Verify the following:

\[
\frac{d}{dx}(\cot(x)) = -\csc(x)
\]

\[
\frac{d}{dx}(\sec(x)) = \sec(x)\tan(x)
\]

\[
\frac{d}{dx}(\csc(x)) = -\cot(x)\csc(x)
\]

Problem 2

Find the derivative of the following functions:

\[
i(x) = \frac{x^2 \sin(\ln(x))}{\cos(x)}
\]

\[
\frac{d}{dx}(e^{\tan(x)})\sin(x^2 \ln(x))
\]