FIRST LIST OF DERIVATIVES for THE FIRST MIDTERM

\[(c)' = 0, \text{ if } c \in \mathbb{R} \text{ is a constant,}\]
\[(x^n)' = nx^{n-1},\]
\[(e^x)' = e^x, \text{ compute } (c^x)' \text{ using } c^x = e^{\ln c},\]
\[(\sin x)' = \cos x, \quad (\cos x)' = -\sin x,\]
\[(\tan x)' = \sec^2 x, \quad (\cot x)' = -\csc^2 x,\]
\[(\sinh x)' = \cosh x, \quad (\cosh x)' = \sinh x.\]

You are expected to be able to quickly compute the following derivatives using the above list:

\[(\sec x)', \quad (\csc x)',\]
\[(\tanh x)', \quad (\coth x)', \quad (\sech x)', \quad (\csch x)'.\]

\[1\text{You are expected to know this.}\]