

## IMP 11: REVISED LIST OF DERIVATIVE RULES

1.  $\frac{d}{dx}(c) = 0$ , for any constant  $c$
2.  $\frac{d}{dx}(x^n) = nx^{n-1}$
3.  $\frac{d}{dx}(\sin x) = \cos x$
4.  $\frac{d}{dx}(\cos x) = -\sin x$
5.  $\frac{d}{dx}(\tan x) = \sec^2 x$
6.  $\frac{d}{dx}(\sec x) = \sec x \tan x$
7.  $\frac{d}{dx}(\cot x) = -\csc^2 x$
8.  $\frac{d}{dx}(\csc x) = -\csc x \cot x$
9.  $\frac{d}{dx}(e^x) = e^x$
10.  $\frac{d}{dx}(b^x) = b^x \ln b$
11.  $\frac{d}{dx}(\ln x) = \frac{1}{x}$
12.  $\frac{d}{dx}(\log_b x) = \frac{1}{x \ln b}$
13.  $\frac{d}{dx}(\sin^{-1} x) = \frac{1}{\sqrt{1-x^2}}$
14.  $\frac{d}{dx}(\tan^{-1} x) = \frac{1}{1+x^2}$