

$$(1) \quad (c)' = 0, \text{ where } c \text{ is any constant,}$$

$$(2) \quad (x^n)' = nx^{n-1},$$

$$(3) \quad (e^x)' = e^x,$$

$$(4) \quad (a^x)' = a^x \ln a,$$

$$(5) \quad (x)' = 1,$$

$$(6) \quad \left(\frac{1}{x}\right)' = -\frac{1}{x^2},$$

$$(7) \quad (\ln x)' = \frac{1}{x},$$

$$(8) \quad (\sin x)' = \cos x,$$

$$(9) \quad (\cos x)' = -\sin x,$$

$$(10) \quad (\tan x)' = \frac{1}{\cos^2 x},$$

$$(11) \quad (\arcsin)' = \frac{1}{\sqrt{1-x^2}},$$

$$(12) \quad (\arccos x)' = \frac{-1}{\sqrt{1-x^2}},$$

$$(13) \quad (\arctan x)' = \frac{1}{1+x^2}.$$