$$1.C' = 0$$

$$2.x' = 1$$

$$3.\left(\sqrt{x}\right)' =$$

$$3.\left(\sqrt{x}\right)' = \frac{1}{2\sqrt{x}}$$

$$4.\left(\alpha^{x}\right)' = \alpha^{x} \ln x$$

$$4.(a^x)' = a^x \ln a$$

$$5.(x^{\alpha})' = \alpha \cdot x^{\alpha-1}, x \in R$$

$$5.(x') = \alpha \cdot x$$
$$6.(e^x)' = e^x$$

$$7.(\log_a x)' = \frac{1}{x \ln a}$$

$$7.(\log_a x)' = \frac{1}{x \cdot \ln a}$$

$$8.(\ln x)' = \frac{1}{x}$$

$$9.(\sin x)' = \cos x$$

$$9.(\sin x)' = \cos x$$

$$9.(\sin x)' = \cos x$$
$$10.(\cos x)' = -\sin x$$

$$11.(tgx)' = \frac{1}{\cos^2 x}$$

$$12.(cta.x)' = -\frac{1}{\cos^2 x}$$

12.
$$(ctg \ x)' = -\frac{1}{\sin^2 x}$$
13. $(arcsin \ x)' = \frac{1}{\sqrt{1-x^2}}$ 
14. $(arccos \ x)' = -\frac{1}{\sqrt{1-x^2}}$ 

14. 
$$(\arccos x)' = -\frac{1}{\sqrt{1-x^2}}$$
  
15.  $(\arctan x)' = \frac{1}{1+x^2}$ 

16.
$$(arcctg \ x)' = -\frac{1}{1+x^2}$$
17. $(sh \ x)' = ch \ x$ 

$$18.(ch x)' = sh x$$

$$19.(th x)' = \frac{1}{ch^{2}x_{1}}$$

$$20.(cth x)' = -\frac{1}{sh^{2}x}$$