

$$\underline{y = f(x)} \quad \underline{y' = f'(x)}$$

$$x \quad 1$$

$$k = n^o \quad 0$$

$$u \pm v \quad u' \pm v'$$

$$u^n \quad n u^{n-1} u'$$

$$u v \quad u' v + u v'$$

$$\frac{u}{v} \quad \frac{u' v - u v'}{v^2}$$

$$\sqrt{u} \quad \frac{u'}{2\sqrt{u}}$$

$$\sqrt[n]{u} \quad \frac{u'}{n \sqrt[n]{u^{n-1}}}$$

$$e^u \quad u' e^u$$

$$a^u \quad u' a^u \ln a$$

$$\ln u \quad \frac{u'}{u}$$

$$\log_a u \quad \frac{u'}{u} \log_a e$$

$$\operatorname{sen} u \quad u' [\cos u]$$

$$\cos u \quad -u' [\operatorname{sen} u]$$

$$\operatorname{tg} u \quad \frac{u'}{\cos^2 u} = u' [1 + \operatorname{tg}^2 u]$$

$$\operatorname{ctg} u \quad -\frac{u'}{\operatorname{sen}^2 u} = -u' [1 + \operatorname{ctg}^2 u]$$

$$\operatorname{arc sen} u \quad \frac{u'}{\sqrt{1-u^2}}$$

$$\operatorname{arccos} u \quad -\frac{u'}{\sqrt{1-u^2}}$$

$$\operatorname{arctg} u \quad \frac{u'}{1+u^2}$$

$$\operatorname{arcctg} u \quad -\frac{u'}{1+u^2}$$