Derivadas

1.
$$(u.v)' = u'v + uv'$$

$$2. \left(\frac{u}{v}\right)' = \frac{u'v - v'u}{v^2}$$

3.
$$(u^n)' = nu^{n-1}u'$$

4.
$$(e^u)' = u'e^u$$

5.
$$(a^u)' = u'a^u \ln(a)$$

6.
$$(u^{\nu})' = \nu u^{\nu-1} u' + \nu' u^{\nu} \ln(u)$$

7.
$$(\ln(u))' = \frac{u'}{u}$$

8.
$$(\log_a(u))' = \frac{u'}{u \ln(a)}$$

9.
$$(\operatorname{sen}(u))' = u' \cos(u)$$

10.
$$(\cos(u))' = -u' \sin(u)$$

11.
$$(tg(u))' = u' sec^2(u)$$

12.
$$(\cot g(u))' = -u' \csc^2(u)$$

13.
$$(\sec(u))' = u' \sec(u) \operatorname{tg}(u)$$

14.
$$(\csc(u))' = -u' \csc(u) \cot(u)$$

15.
$$(arcsen(u))' = \frac{u'}{\sqrt{1-u^2}}$$

16.
$$(\arccos(u))' = -\frac{u'}{\sqrt{1-u^2}}$$

17.
$$(\operatorname{arctg}(u))' = \frac{u'}{1+u^2}$$

18.
$$(\operatorname{arccotg}(u))' = -\frac{u'}{1+u^2}$$

Integrais

1.
$$\int a(u \pm v) = a \int u \, dx \pm a \int v \, dx$$

2.
$$\int u'u^n dx = \frac{u^{n+1}}{n+1} + C, n \neq -1$$

$$3. \int \frac{u'}{u} dx = \ln|u| + C$$

$$4. \int u'e^u dx = e^u + C$$

$$5. \int u'a^u dx = \frac{a^u}{\ln(a)} + C$$

6.
$$\int u' \operatorname{sen}(u) \, dx = -\cos(u) + C$$

7.
$$\int u'\cos(u)\,dx = \operatorname{sen}(u) + C$$

8.
$$\int u' \sec^2(u) dx = \operatorname{tg}(u) + C$$

9.
$$\int u' \csc^2(u) dx = -\cot g(u) + C$$

10.
$$\int u' \sec(u) \operatorname{tg}(u) dx = \sec(u) + C$$

11.
$$\int u' \csc(u) \cot g(u) dx = -\csc(u) + C$$

12.
$$\int \frac{u'}{1+u^2} dx = \arctan(u) + C$$

$$13. \int \frac{u'}{\sqrt{1-u^2}} dx = \arcsin(u) + C$$

14.
$$\int u' \operatorname{tg}(u) dx = -\ln|\cos(u)| + C$$

15.
$$\int u' \cot g(u) dx = \ln|\sin(u)| + C$$

$$16. \int u' \sec(u) \, dx = \ln|\sec(u) + \cot(u)| + C$$

17.
$$\int u' \csc(u) dx = -\ln|\csc(u) + \cot(u)| + C$$