

TABLA DE INTEGRALES INMEDIATAS

| TIPOS  | FORMAS  |   |
|--|---|---|
|  | Simple  | Compuesta   |
| 1. Tipo potencial ( $a \neq -1$ )                | $\int x^a dx = \frac{x^{a+1}}{a+1}$   | $\int f^a f' dx = \frac{f^{a+1}}{a+1}$  |
| 2. Tipo logarítmico                              | $\int \frac{1}{x} dx = L x $  | $\int \frac{f'}{f} dx = L f $   |
| 3. Tipo exponencial                              | $\int e^x dx = e^x$<br>$\int a^x dx = \frac{a^x}{L a}$  | $\int e^f \cdot f' dx = e^f$<br>$\int a^f \cdot f' dx = \frac{a^f}{L a}$  |
| 4. Tipo seno                                     | $\int \cos x dx = \text{sen } x$  | $\int \cos f \cdot f' = \text{sen } f$  |
| 5. Tipo coseno                                   | $\int \text{sen } x dx = -\cos x$   | $\int \text{sen } f \cdot f' = -\cos f$   |
| 6. Tipo tangente                                 | $\int \sec^2 x dx = \text{tg } x$<br>$\int (1 + \text{tg}^2 x) dx = \text{tg } x$<br>$\int \frac{1}{\cos^2 x} dx = \text{tg } x$                          | $\int \sec^2 f dx = \text{tg } f$<br>$\int (1 + \text{tg}^2 f) dx = \text{tg } f$<br>$\int \frac{f'}{\cos^2 f} dx = \text{tg } f$                         |
| 7. Tipo cotangente                               | $\int \text{cosec}^2 x dx = -\text{cotg } x$<br>$\int (1 + \text{cotg}^2 x) dx = -\text{cotg } x$<br>$\int \frac{1}{\text{sen}^2 x} dx = -\text{cotg } x$ | $\int \text{cosec}^2 f dx = -\text{cotg } f$<br>$\int (1 + \text{cotg}^2 f) dx = -\text{cotg } f$<br>$\int \frac{1}{\text{sen}^2 f} dx = -\text{cotg } f$ |
| 8. Tipo arco seno ( = arco coseno )              | $\int \frac{1}{\sqrt{1-x^2}} dx = \text{arcsen } x$<br>$= \text{arccos } x$   | $\int \frac{f'}{\sqrt{1-f^2}} dx = \text{arcsen } f$<br>$= \text{arccos } f$  |
| 9. Tipo arco tangente<br>( = - arco cotangente ) | $\int \frac{1}{1+x^2} dx = \text{arctg } x$<br>$= -\text{arccotg } x$<br>$\int \frac{1}{a^2+x^2} dx = \frac{1}{a} \text{arctg } \frac{x}{a}$              | $\int \frac{f'}{1+f^2} dx = \text{arctg } f$<br>$= -\text{arccotg } f$<br>$\int \frac{1}{a^2+f^2} dx = \frac{1}{a} \text{arctg } \frac{f}{a}$             |
| 10. Tipo neperiano – arcotangente                | $\int \frac{Mx + N}{ax^2 + bx + c} dx$<br>$= \text{neperiano} + \text{arctg}$<br><br>$M \neq 0, ax^2 + bx + c \text{ irreducible}$                        |   |