



## FORMULE INTEGRALE NEDEFINITE

|                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| $\int dx =$                            | $\ln(x + \sqrt{x^2 + a^2}) + C$                       |
| $\int x dx =$                          | $\arcsin x + C$                                       |
| $\int x^n dx =$                        | $-\cos x + C$                                         |
| $\int \sqrt{x} dx =$                   | $\arcsin \frac{x}{a} + C$                             |
| $\int e^x dx =$                        | $\frac{x^{n+1}}{n+1} + C$                             |
| $\int a^x dx =$                        | $\sqrt{x^2 + a^2} + C$                                |
| $\int \frac{1}{x} dx =$                | $\frac{x^2}{2} + C$                                   |
| $\int \frac{1}{x^2 - a^2} dx =$        | $e^x + C$                                             |
| $\int \frac{1}{x^2 + 1} dx =$          | $\frac{a^x}{\ln a} + C$                               |
| $\int \frac{1}{x^2 + a^2} dx =$        | $\sin x + C$                                          |
| $\int \frac{1}{\sqrt{1-x^2}} dx =$     | $\frac{2}{3} x\sqrt{x} + C$                           |
| $\int \frac{1}{\sqrt{a^2 - x^2}} dx =$ | $-\sqrt{a^2 - x^2} + C$                               |
| $\int \sin x dx =$                     | $x + C$                                               |
| $\int \cos x dx =$                     | $-\ln \cos x  + C$                                    |
| $\int \operatorname{tg} x dx =$        | $\ln \sin x  + C$                                     |
| $\int \operatorname{ctg} x dx =$       | $\operatorname{tg} x + C$                             |
| $\int \frac{1}{\cos^2 x} dx =$         | $\ln x  + C$                                          |
| $\int \frac{1}{\sin^2 x} dx =$         | $\operatorname{arctg} x + C$                          |
| $\int \frac{x}{\sqrt{x^2 - a^2}} dx =$ | $\ln x + \sqrt{x^2 - a^2}  + C$                       |
| $\int \frac{x}{\sqrt{x^2 + a^2}} dx =$ | $\frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$    |
| $\int \frac{x}{\sqrt{a^2 - x^2}} dx =$ | $\frac{1}{2a} \ln \left  \frac{x-a}{x+a} \right  + C$ |
| $\int \frac{1}{\sqrt{x^2 - a^2}} dx =$ | $-\operatorname{ctg} x + C$                           |
| $\int \frac{1}{\sqrt{x^2 + a^2}} dx =$ | $\sqrt{x^2 - a^2} + C$                                |