Integrali indefiniti elementari

(1)
$$\int \sin x \, dx = -\cos x + C$$

(2)
$$\int \cos x \, dx = \sin x + C$$

(3)
$$\int \frac{1}{\cos^2 x} \, dx = \int (1 + \tan^2 x) \, dx = \tan x + C$$

(4)
$$\int \frac{1}{\sin^2 x} \, dx = \int (1 + \cotan^2 x) \, dx = -\cotan x + C$$

(5)
$$\int \sinh x \, dx = \cosh x + C$$

(6)
$$\int \cosh x \, dx = \sinh x + C$$

(7)
$$\int e^x \, dx = e^x + C$$

(8)
$$\int a^x \, dx = \frac{a^x}{\ln a} + C, \qquad a > 0, \, a \neq 1$$

(9)
$$\int x^\alpha \, dx = \frac{x^{\alpha+1}}{\alpha + 1} + C, \qquad \alpha \neq -1$$

(10)
$$\int (x + a)^\alpha \, dx = \frac{(x + a)^{\alpha+1}}{\alpha + 1} + C, \qquad \alpha \neq -1, \, \forall a \in \mathbb{R}$$

(11)
$$\int \frac{1}{x} \, dx = \ln |x| + C$$

(12)
$$\int \frac{1}{x + a} \, dx = \ln |x + a| + C, \qquad \forall a \in \mathbb{R}$$

(13)
$$\int \frac{1}{\sqrt{1 - x^2}} \, dx = \arcsin x + C$$

(14)
$$\int \frac{1}{\sqrt{a^2 - x^2}} \, dx = \arcsin \left(\frac{x}{a} \right) + C, \qquad \forall a > 0$$

(15)
$$\int \frac{1}{1 + x^2} \, dx = \arctan x + C$$

(16)
$$\int \frac{1}{a^2 + x^2} \, dx = \frac{1}{a} \arctan \left(\frac{x}{a} \right) + C, \qquad \forall a > 0$$

(17)
$$\int \frac{x}{a^2 + x^2} \, dx = \frac{1}{2} \ln(a^2 + x^2) + C, \qquad \forall a > 0$$

(18)
$$\int \ln x \, dx = x \ln x + C$$

(19)
$$\int \arctan x \, dx = x \arctan x - \frac{1}{2} \ln(1 + x^2) + C$$

(20)
$$\int \arcsin x \, dx = x \arcsin x + \sqrt{1 - x^2} + C$$