$$
\begin{aligned}
\int 0\,dx &= C, \quad x \in \mathbb{R} \\
\int dx = \int 1\,dx &= x + C, \quad x \in \mathbb{R} \\
\int x^n\,dx &= \frac{x^{n+1}}{n+1} + C, \quad x \in (0,\infty), n \in \mathbb{R} \setminus \{-1\} \\
\int x^{-1}\,dx = \int \frac{1}{x}\,dx &= \ln x + C, \quad x \in (0,\infty) \\
\int x^{-1}\,dx = \int \frac{1}{x}\,dx &= \ln(-x) + C, \quad x \in (-\infty,0)
\end{aligned}
\Bigg\} \int x^{-1}\,dx = \ln|x| + C, \quad x \in \mathbb{R} \setminus \{0\}
$$

$$
\begin{aligned}
\int e^x\,dx &= e^x + C, \quad x \in \mathbb{R} \\
\int a^x\,dx &= \frac{a^x}{\ln a} + C, \quad x \in \mathbb{R}, a \in (0,1) \cup (1,\infty) \\
\int \sin x\,dx &= -\cos x + C, \quad x \in \mathbb{R} \\
\int \cos x\,dx &= \sin x + C, \quad x \in \mathbb{R} \\
\int \frac{1}{\cos^2 x}\,dx &= \operatorname{tg} x + C, \quad x \in \left(-\frac{\pi}{2} + k\pi, \frac{\pi}{2} + k\pi\right), k \in \mathbb{Z} \\
\int \frac{1}{\sin^2 x}\,dx &= -\operatorname{cotg} x + C, \quad x \in (k\pi, \pi + k\pi)\,; k \in \mathbb{Z}
\end{aligned}
$$

$$
\begin{aligned}
\int a f(x)\,dx &= a \int f(x)\,dx \\
\int [f(x) + g(x)]\,dx &= \int f(x)\,dx + \int g(x)\,dx \\
\int [f(x) - g(x)]\,dx &= \int f(x)\,dx - \int g(x)\,dx
\end{aligned}
$$