This is a list of the integrals that you should remember. The constant $C$ is omitted from the result.

\[
\int x^n \, dx = \frac{1}{n+1} x^{n+1}, \quad (n \neq -1), \quad \int \frac{1}{x} \, dx = \log x
\]

\[
\int e^x \, dx = e^x, \quad \int \sin x \, dx = -\cos x, \quad \int \cos x \, dx = \sin x
\]

\[
\int \sec^2 x \, dx = \tan x, \quad \int \csc^2 x \, dx = -\cot x
\]

\[
\int \frac{dx}{x^2 + a^2} = \frac{1}{a} \arctan (x/a), \quad \int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin (x/a)
\]