



$$\int x^n dx$$

$$\frac{x^{n+1}}{n+1} + c$$



$$\int \cos kx \, dx$$

$$\frac{1}{k} \sin kx + c$$



$$\int \cos 2x \, dx$$

$$\frac{1}{2} \sin 2x + c$$



$$\int \sin kx \, dx$$
$$= -\frac{1}{k} \cos kx + c$$



$$\int \sin \frac{1}{2} x \, dx$$
$$- 2 \cos \frac{1}{2} x + c$$



$$\int e^{kx} dx$$

$$\frac{1}{k} e^{kx} + c$$



$$\int e^{2x} dx$$

$$\frac{1}{2} e^{2x} + c$$



$$\int e^{-x} dx$$
$$= -e^{-x} + c$$



$$\int \frac{1}{x} dx$$

$$\ln |x| + c \quad x \neq 0$$