

A Small Integration Table

1. $\int x^n \, dx = \frac{1}{n+1} x^{n+1} + C, n \neq -1$

2. $\int \frac{1}{x} \, dx = \ln |x| + C$

3. $\int e^x \, dx = e^x + C$

4. $\int e^{kx} \, dx = \frac{1}{k} e^{kx} + C$ for $k \in \mathbb{R}$

5. $\int a^x \, dx = \frac{1}{\ln(a)} a^x + C$ for $a > 0$

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

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

As we discussed in class, the improvement of Rule 3 to Rule 4 can be done for the rest of the Rules, but I leave that to you.