1.	$\int k \cdot f(x)\,dx$	1.	$k \cdot \int f(x)\,dx$
2.	$\int \left[f(x) \pm g(x) \right] dx$	2.	$\int f(x)\,dx \pm \int g(x)\,dx$
3.	$\int 1 \cdot dx$	3.	$x + C$
4.	**U-Substitution** $\int_a^b g'(f(x)) \cdot f'(x)\,dx$ $u = f(x) \qquad u(a) = f(a)$ $du = f'(x)\,dx \quad u(b) = f(b)$	4.	$\int_a^b g'(\underset{\sim\sim\sim\sim\sim}{f(x)}) \cdot \underline{\underline{f'(x)\,dx}}$ $\downarrow$ $\int_{u(a)}^{u(b)} g'(\underset{\sim\sim\sim}{u}) \underline{\underline{du}}$

5.	$\int u^n \cdot u' dx$	5.	$\frac{1}{n+1} u^{n+1} + C$
6.	$\int \frac{1}{u} \cdot u' dx$	6.	$\ln\left\|u\right\| + C$
7.	$\int a^u \cdot u' dx$	7.	$\frac{1}{\ln(a)} \cdot a^u + C$
8.	$\int e^u \cdot u' dx$	8.	$e^u + C$

9.	$\int \cos(u) \cdot u' dx$	9.	$\sin(u) + C$
10.	$\int \sin(u) \cdot u' dx$	10.	$-\cos(u) + C$
11.	$\int \sec^2(u) \cdot u' dx$	11.	$\tan(u) + C$
12.	$\int \csc^2(u) \cdot u' dx$	12.	$-\cot(u) + C$

13.	$\int \sec(u)\tan(u)\cdot u'dx$	13.	$\sec(u)+C$
14.	$\int \csc(u)\cot(u)\cdot u'dx$	14.	$-\csc(u)+C$
15.	$\int \frac{1}{\sqrt{a^2-u^2}}\cdot u'dx$	15.	$\arcsin\left(\frac{u}{a}\right)+C$
16.	$\int \frac{1}{a^2+u^2}\cdot u'dx$	16.	$\frac{1}{a}\arctan\left(\frac{u}{a}\right)+C$

17.	$\int \frac{1}{u\sqrt{u^2-a^2}} \cdot u'dx$	17.	$\frac{1}{a}\operatorname{arcsec}\left(\frac{u}{a}\right)+C$
18.	$\int_a^b f'(x)\,dx$ Definite Integral of The Rate of Change of $f(x)$	18.	$f(b)-f(a)$ Net change in $f(x)$ from $x=a$ to $x=b$
19.	$\int uv'$	19.	$uv-\int u'v$ Choose u so that u' is simpler than u
20.	$\int_k^\infty f(x)\,dx$	20.	$\lim_{b\to\infty}\int_k^b f(x)\,dx=\lim_{b\to\infty}\left[F(b)-F(k)\right]$

21.	$\int_{-\infty}^{k} f(x)\,dx$	21.	$\lim_{b\to-\infty}\int_{b}^{k} f(x)\,dx = \lim_{b\to-\infty}\left[F(k)-F(b)\right]$
22.	$\int_{-\infty}^{\infty} f(x)\,dx$	22.	$\int_{-\infty}^{\infty} f(x)\,dx = \int_{-\infty}^{k} f(x)\,dx + \int_{k}^{\infty} f(x)\,dx$
23.	Partial Fractions (Linear Factor) $\dfrac{a_n x^n + a_{n-1}x^{n-1} + \cdots a_1 x + a_0}{(px+q)^{n+1}}$	23.	Partial Fractions Decomposition (Linear Factor Contribution) $\dfrac{A_1}{(px+q)} + \dfrac{A_2}{(px+q)^2} + \cdots + \dfrac{A_{n+1}}{(px+q)^{n+1}}$
24.	Partial Fractions (Irreducible Quadratic Factor) $\dfrac{a_n x^n + a_{n-1}x^{n-1} + \cdots a_1 x + a_0}{(px^2+qx+r)^{n+1}}$	24.	Partial Fractions Decomposition (Irreducible Quadratic Factor Contribution) $\dfrac{B_1 x + C_1}{(px^2+qx+r)} + \cdots + \dfrac{B_{n+1}x + C_{n+1}}{(px^2+qx+r)^{n+1}}$