# 常用凑微分法

| 序号 | 原式 | 变式 |
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| 1 | $\int f(ax+b)\mathrm{d}x$（$a\neq 0$） | $\frac{1}{a}\int f(ax+b)\mathrm{d}ax+b$ |
| 2 | $\int f(\sin x)\cos x\mathrm{d}x$ | $\int f(\sin x)\mathrm{d}(\cos x)$ |
| 3 | $\int f(\cos x)\sin x\mathrm{d}x$ | $-\int f(\cos x)\mathrm{d}(\cos x)$ |
| 4 | $\int f(\ln x)\frac{1}{x}\mathrm{d}x$ | $\int f(\ln x)\mathrm{d}(\ln x)$ |
| 5 | $\int f(x^n)x^{n-1}\mathrm{d}x(n\neq 0)$ | $\frac{1}{n}\int f(x^n)\mathrm{d}(x^n)$ |
| 6 | $\int f(\frac{1}{x^n})\frac{1}{x^{n+1}}\mathrm{d}x(n\neq 0)$ | $-\frac{1}{n}\int f(\frac{1}{x^n})\mathrm{d}(\frac{1}{x^n})$ |
| 7 | $\int f(\tan x)\frac{\mathrm{d}x}{\cos^2 x}$ | $\int f(\tan x)\mathrm{d}(\tan x)$ |
| 8 | $\int f(\cot x)\frac{\mathrm{d}x}{\sin^2 x}$ | $-\int f(\cot x)\mathrm{d}(\cot x)$ |
| 9 | $\int f(\arcsin x)\frac{\mathrm{d}x}{\sqrt{1-x^2}}$ | $\int f(\arcsin x)\mathrm{d}(\arcsin x)$ |
| 10 | $\int f(\arctan x)\frac{\mathrm{d}x}{1+x^2}$ | $\int f(\arctan x)\mathrm{d}(\arctan x)$ |
| 11 | $\int \frac{f'(x)}{f(x)}\mathrm{d}x$ | $\int \frac{\mathrm{d}f(x)}{f(x)}=\ln\lvert f(x)\rvert+C$ |