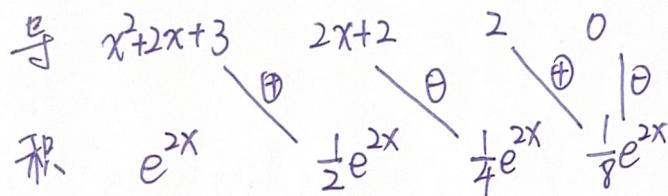


表格积分法

$$\cdot \int P_n(x) e^{ax} dx \quad \cdot \int Q_m(x) \sin bx dx$$

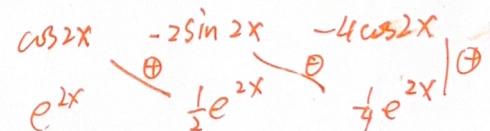
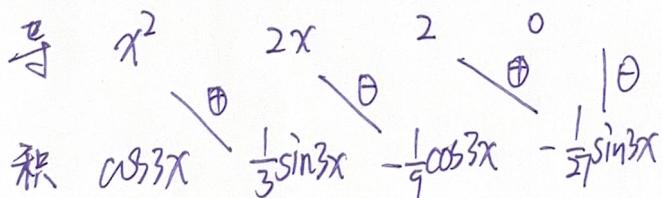
$$\text{eg. } \int (x^2 + 2x + 3)e^{2x} dx$$



$$I = \frac{1}{2}e^{2x}(x^2 + 2x + 3) - \frac{1}{4}e^{2x}(2x + 2) + \frac{1}{4}e^{2x} + C$$

$$\text{eg. } \int x^2 \cos 3x dx$$

无法导至0而，导至出现  
循环为止。



$$I = \frac{1}{3}x^2 \sin 3x + \frac{2}{9}x \cos 3x - \frac{1}{27} \sin 3x + C$$

$$\text{eg. } \int_0^a xe^{2x} dx = \frac{1}{4}, a = ? \quad [no 4, 3]$$

$$\begin{array}{cccc} \text{导数} & x & 1 & 0 \end{array}$$

$$\begin{array}{cccc} \text{积} & e^{2x} & \frac{1}{2}e^{2x} & \frac{1}{4}e^{2x} \end{array}$$

$$I = \left. \frac{1}{2}xe^{2x} - \frac{1}{4}e^{2x} \right|_0^a$$

$$a = \frac{1}{2}$$