Proof that the following formula is unbounded:

$$\sum_{i=0}^{n}\left(\frac{1}{ni!(n-i)!}\int_0^n\prod_{\substack{j=0\\j\neq i}}^{n}(t-j)\mathrm{d}t\right)$$

In fact, in *Numerical Analysis*, we know *Newton − Cotes method*, and the *Cotes number*'s formula is shown below:

$$C_i^{(n)}=\frac{(-1)^{n-i}}{ni!(n-i)!}\int_0^n\prod_{\substack{j=0\\j\neq i}}^{n}(t-j)\mathrm{d}t$$

Here is an important quality that we can refer to:

$$\sum_{i=0}^{n}C_i^{(n)}=1$$

But the following one

$$\sum_{i=0}^{n}\left|C_i^{(n)}\right|$$

is unbounded.