



$$a+b=1$$

$$ab=-1 \end{cases} \text{ 解得 } \begin{cases} A=\frac{1}{\sqrt{5}} \\ B=-\frac{1}{\sqrt{5}} \end{cases}$$

$$a=\frac{1+\sqrt{5}}{2}$$

$$b=\frac{1-\sqrt{5}}{2} \end{cases} \text{ 由此得到 } \frac{x}{1-x-x^2}=\sum_{n=0}^{\infty} x^n \frac{1}{\sqrt{5}} \left( \left( \frac{1+\sqrt{5}}{2} \right)^n - \left( \frac{1-\sqrt{5}}{2} \right)^n \right)$$

即斐波那契数列的通项公式为 
$$a_n = \frac{1}{\sqrt{5}} \left( \left( \frac{1+\sqrt{5}}{2} \right)^n - \left( \frac{1-\sqrt{5}}{2} \right)^n \right)$$

From: <https://wiki.cvbbacm.com/> - CVBB ACM Team

Permanent link: [https://wiki.cvbbacm.com/doku.php?id=2020-2021:teams:legal\\_string:lgwza:%E7%94%9F%E6%88%90%E5%87%BD%E6%95%B0%E7%90%86%E8%AE%BA\\_2\\_%E5%9F%BA%E6%9C%AC%E4%BE%8B%E5%AD%90&rev=1612939539](https://wiki.cvbbacm.com/doku.php?id=2020-2021:teams:legal_string:lgwza:%E7%94%9F%E6%88%90%E5%87%BD%E6%95%B0%E7%90%86%E8%AE%BA_2_%E5%9F%BA%E6%9C%AC%E4%BE%8B%E5%AD%90&rev=1612939539)

Last update: 2021/02/10 14:45