LaTeX3—使用递归

ljguo1020@gmail.com

2022 年 6 月 5 日

计算 $n!$

$$n! = \begin{cases} 1, & n = 0 \\ n(n-1)!, & n \geq 1 \end{cases}$$

$1! = 1$
$2! = 2$
$3! = 6$
$4! = 24$
$5! = 120$
$6! = 720$
$7! = 5040$
$8! = 40320$
$9! = 362880$
$10! = 3628800$
$11! = 39916800$
$12! = 479001600$
$13! = 6227020800$
$14! = 87178291200$
$15! = 1307674368000$
$16! = 20922789888000$
$17! = 355687428096000$
$18! = 6402373705728000$
$19! = 121645100408832000$
$20! = 2432902008176640000$

计算斐波那契数列

$$F(n) = \begin{cases} 0, & n = 0 \\ 1, & n = 1 \\ F(n-1) + F(n-2), & n \geq 2 \end{cases}$$

$\mathrm{F}(1) = 1$
$\mathrm{F}(2) = 1$
$\mathrm{F}(3) = 2$
$\mathrm{F}(4) = 3$
$\mathrm{F}(5) = 5$
$\mathrm{F}(6) = 8$
$\mathrm{F}(7) = 13$
$\mathrm{F}(8) = 21$
$\mathrm{F}(9) = 34$
$\mathrm{F}(10) = 55$
$\mathrm{F}(11) = 89$
$\mathrm{F}(12) = 144$
$\mathrm{F}(13) = 233$
$\mathrm{F}(14) = 377$
$\mathrm{F}(15) = 610$
$\mathrm{F}(16) = 987$
$\mathrm{F}(17) = 1597$
$\mathrm{F}(18) = 2584$
$\mathrm{F}(19) = 4181$
$\mathrm{F}(20) = 6765$