POSEBNI KONAČNI ZBROJEVI (m©h)

- $1+2+3+4+\ \dots\ +n=\frac{n\cdot(n+1)}{2},$
- $1\cdot 2+2\cdot 3+3\cdot 4+4\cdot 5+\ \dots\ +n\cdot(n+1)=\frac{n\cdot(n+1)\cdot(n+2)}{3},$
- $1\cdot 1!+2\cdot 2!+3\cdot 3!+4\cdot 4!+5\cdot 5!+\ \dots\ +n\cdot n!=(n+1)!-1,$
- $1\cdot 2\cdot 3+2\cdot 3\cdot 4+3\cdot 4\cdot 5+4\cdot 5\cdot 6+\ \dots\ +n\cdot(n+1)\cdot(n+2)=\frac{n\cdot(n+1)\cdot(n+2)\cdot(n+3)}{4},$
- $1\cdot 3+3\cdot 5+5\cdot 7+7\cdot 9+\ \dots\ +(2\cdot n-1)\cdot(2\cdot n+1)=\frac{2\cdot n\cdot(n+1)\cdot(2\cdot n+1)}{3}-n,$
- $1\cdot 3+2\cdot 4+3\cdot 5+4\cdot 6+\ \dots\ +n\cdot(n+2)=\frac{n\cdot(n+1)\cdot(2\cdot n+7)}{6},$
- $p+(p+1)+(p+2)+(p+3)+\ \dots\ +(p+n)=\frac{(n+1)\cdot(2\cdot p+n)}{2},$
- $1+3+5+7+\ \dots\ +(2\cdot n-1)=n^2,$
- $2+4+6+8+\ \dots\ +2\cdot n=n\cdot(n+1),$
- $1^2+2^2+3^2+4^2+\ \dots\ +n^2=\frac{n\cdot(n+1)\cdot(2\cdot n+1)}{6},$
- $1^2-2^2+3^2-4^2+\ \dots\ +(-1)^{n-1}\cdot n^2=\frac{(-1)^{n-1}n\cdot(n+1)}{2},$
- $1+2+2^2+2^3+2^4+\ \dots\ +2^{n-1}=2^n-1,$
- $1^3+2^3+3^3+4^3+\ \dots\ +n^3=\frac{n^2\cdot(n+1)^2}{4},$
- $2^3+4^3+6^3+8^3+\ \dots\ +(2\cdot n)^3=2\cdot n^2\cdot(n+1)^2,$
- $1^4+2^4+3^4+4^4+\ \dots\ +n^4=\frac{n\cdot(n+1)\cdot(2\cdot n+1)\cdot\left(3\cdot n^2+3\cdot n-1\right)}{30},$
- $1^5+2^5+3^5+4^5+\ \dots\ +n^5=\frac{n^2\cdot(n+1)^2\cdot\left(2\cdot n^2+2\cdot n-1\right)}{12},$
- $1^2+3^2+5^2+7^2+\ \dots\ +(2\cdot n-1)^2=\frac{n\cdot\left(4\cdot n^2-1\right)}{3},$
- $1^3+3^3+5^3+7^3+\ \dots\ +(2\cdot n-1)^3=n^2\cdot\left(2\cdot n^2-1\right),$
- $1+2\cdot x+3\cdot x^2+4\cdot x^3+\ \dots\ +n\cdot x^{n-1}=\frac{1-(n+1)\cdot x^n+n\cdot x^{n+1}}{(1-x)^2},\ x\neq 1.$
- $\frac{1}{6}+\frac{1}{12}+\frac{1}{20}+\ \dots\ +\frac{1}{n^2+3\cdot n+2}=\frac{n}{2\cdot n+4},$
- $\frac{1}{1\cdot 2}+\frac{1}{2\cdot 3}+\frac{1}{3\cdot 4}+\ \dots\ +\frac{1}{n\cdot(n+1)}=\frac{n}{n+1},$
- $\frac{1}{1\cdot 2\cdot 3}+\frac{1}{2\cdot 3\cdot 4}+\frac{1}{3\cdot 4\cdot 5}+\ \dots\ +\frac{1}{n\cdot(n+1)\cdot(n+2)}=\frac{n\cdot(n+3)}{4\cdot(n+1)\cdot(n+2)},$

- $\frac{1}{1\cdot 3}+\frac{1}{3\cdot 5}+\frac{1}{5\cdot 7}+\ \dots\ +\frac{1}{(2\cdot n-1)\cdot(2\cdot n+1)}=\frac{n}{2\cdot n+1},$
- $\frac{1}{1\cdot 4}+\frac{1}{4\cdot 7}+\frac{1}{7\cdot 10}+\ \dots\ +\frac{1}{(3\cdot n-2)\cdot(3\cdot n+1)}=\frac{n}{3\cdot n+1},$
- $\frac{1}{1\cdot 5}+\frac{1}{5\cdot 9}+\frac{1}{9\cdot 13}+\ \dots\ +\frac{1}{(4\cdot n-3)\cdot(4\cdot n+1)}=\frac{n}{4\cdot n+1},$
- $\frac{1}{2\cdot 4}+\frac{1}{4\cdot 6}+\frac{1}{6\cdot 8}+\ \dots\ +\frac{1}{2\cdot n\cdot(2\cdot n+2)}=\frac{n}{2\cdot(2\cdot n+2)},$
- $\frac{1}{1\cdot 3\cdot 5}+\frac{1}{3\cdot 5\cdot 7}+\frac{1}{5\cdot 7\cdot 9}+\ \dots\ +\frac{1}{(2\cdot n-1)\cdot(2\cdot n+1)\cdot(2\cdot n+3)}=\frac{n\cdot(n+2)}{3\cdot(2\cdot n+1)\cdot(2\cdot n+3)},$
- $\frac{1}{2\,!}+\frac{2}{3\,!}+\frac{3}{4\,!}+\ \dots\ +\frac{n}{n\,!}=1-\frac{1}{(n+1)\,!},$
- $\frac{1}{3}+\frac{2}{3^2}+\frac{3}{3^3}+\ \dots\ +\frac{n}{3^n}=\frac{3}{4}-\frac{2\cdot n+3}{4\cdot 3^n},$
- $\frac{3}{1^2\cdot 2^2}+\frac{5}{2^2\cdot 3^2}+\frac{7}{3^2\cdot 4^2}+\ \dots\ +\frac{2\cdot n+1}{n^2\cdot(n+1)^2}=\frac{n\cdot(n+2)}{(n+1)^2},$
- $\frac{1}{1^2\cdot 2^2}+\frac{2}{3^2\cdot 5^2}+\frac{3}{5^2\cdot 7^2}+\ \dots\ +\frac{n}{(2\cdot n-1)^2\cdot(2\cdot n+1)^2}=\frac{n\cdot(n+1)}{2\cdot(2\cdot n+1)^2},$
- $\frac{1^2}{1\cdot 3}+\frac{2^2}{3\cdot 5}+\frac{3^2}{5\cdot 7}+\ \dots\ +\frac{n^2}{(2\cdot n-1)\cdot(2\cdot n+1)}=\frac{n\cdot(n+1)}{2\cdot(2\cdot n+1)},$
- $\frac{1}{\sqrt{3}+\sqrt{5}}+\frac{1}{\sqrt{5}+\sqrt{7}}+\frac{1}{\sqrt{7}+\sqrt{9}}+\ \dots\ +\frac{1}{\sqrt{2\cdot n-1}+\sqrt{2\cdot n+1}}=\frac{n-1}{\sqrt{3}+\sqrt{2\cdot n+1}},$

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- $\frac{1}{2}+\frac{3}{4}+\frac{5}{6}+\frac{7}{8}+\ \dots\ +\frac{2\cdot n-1}{2\cdot n}+\ \dots=1,$
- $1+\frac{1}{3}+\frac{1}{5}+\frac{1}{7}+\frac{1}{9}+\ \dots\ +\frac{1}{2\cdot n-1}+\ \dots=\frac{1}{3},$
- $1+\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\ \dots\ +\frac{1}{2^n}+\ \dots=2,$
- $1-\frac{1}{2}+\frac{1}{4}-\frac{1}{8}+\frac{1}{16}-\ \dots\ \pm\frac{1}{2^n}\mp\ \dots=\frac{2}{3},$
- $1-\frac{1}{2}+\frac{1}{3}-\frac{1}{4}+\frac{1}{5}-\ \dots\ \pm\frac{1}{n}\mp\ \dots=\ln 2,$
- $\frac{1}{1\cdot 2}+\frac{1}{2\cdot 3}+\frac{1}{3\cdot 4}+\frac{1}{4\cdot 5}+\frac{1}{5\cdot 6}+\ \dots+\frac{1}{n\cdot(n+1)}+\ \dots=1,$
- $\frac{1}{1\cdot 3}+\frac{1}{3\cdot 5}+\frac{1}{5\cdot 7}+\frac{1}{7\cdot 9}+\frac{1}{9\cdot 11}+\ \dots+\frac{1}{(2\cdot n-1)\cdot(2\cdot n+1)}+\ \dots=\frac{1}{2},$
- $\frac{1}{1\cdot 3}+\frac{1}{2\cdot 4}+\frac{1}{3\cdot 5}+\frac{1}{4\cdot 6}+\frac{1}{5\cdot 7}+\ \dots+\frac{1}{(n-1)\cdot(n+1)}+\ \dots=\frac{3}{4},$
- $\frac{1}{1\cdot 4}+\frac{1}{4\cdot 7}+\frac{1}{7\cdot 10}+\frac{1}{10\cdot 13}+\frac{1}{13\cdot 16}+\ \dots+\frac{1}{(3\cdot n-2)\cdot(3\cdot n+1)}+\ \dots=\frac{1}{3},$
- $\frac{1}{1\cdot 4}+\frac{1}{2\cdot 5}+\frac{1}{3\cdot 6}+\frac{1}{4\cdot 7}+\frac{1}{5\cdot 8}+\ \dots+\frac{1}{n\cdot(n+3)}+\ \dots=\frac{11}{18},$

- $\frac{1}{1\cdot 7}+\frac{1}{3\cdot 9}+\frac{1}{5\cdot 11}+\frac{1}{7\cdot 13}+\frac{1}{9\cdot 15}+\ ...+\frac{1}{(2\cdot n-1)\cdot(2\cdot n+5)}+\ ...=\frac{23}{90},$
- $\frac{1}{1\cdot 2\cdot 3}+\frac{1}{2\cdot 3\cdot 4}+\frac{1}{3\cdot 4\cdot 5}+\frac{1}{4\cdot 5\cdot 6}+\frac{1}{5\cdot 6\cdot 7}+\ ...+\frac{1}{n\cdot(n+1)\cdot(n+2)}+\ ...=\frac{1}{4},$
- $1-\frac{1}{3}+\frac{1}{5}-\frac{1}{7}+\frac{1}{9}-\frac{1}{11}+\ ...\pm\frac{1}{2\cdot n-1}\mp\ ...=\frac{\pi}{4},$
- $\frac{1}{3\cdot 5}+\frac{1}{7\cdot 9}+\frac{1}{11\cdot 13}+\frac{1}{15\cdot 17}+\frac{1}{19\cdot 21}+\ ...+\frac{1}{(4\cdot n-1)\cdot(4\cdot n+1)}+\ ...=\frac{1}{2}-\frac{\pi}{8},$
- $1+\frac{1}{1!}+\frac{1}{2!}+\frac{1}{3!}+\frac{1}{4!}+\frac{1}{5!}+\ ...+\frac{1}{n!}+\ ...=e,$
- $1-\frac{1}{1!}+\frac{1}{2!}-\frac{1}{3!}+\frac{1}{4!}-\frac{1}{5!}+\ ...\pm\frac{1}{n!}\mp\ ...=\frac{1}{e},$
- $1+\frac{1}{2^2}+\frac{1}{3^2}+\frac{1}{4^2}+\frac{1}{5^2}+\frac{1}{6^2}+\ ...+\frac{1}{n^2}+\ ...=\frac{\pi^2}{6},$
- $1-\frac{1}{2^2}+\frac{1}{3^2}-\frac{1}{4^2}+\frac{1}{5^2}-\frac{1}{6^2}+\ ...\pm\frac{1}{n^2}\mp\ ...=\frac{\pi^2}{12},$
- $1+\frac{1}{3^2}+\frac{1}{5^2}+\frac{1}{7^2}+\frac{1}{9^2}+\frac{1}{11^2}+\ ...+\frac{1}{(2\cdot n+1)^2}+\ ...=\frac{\pi^2}{8},$
- $1+\frac{1}{2^4}+\frac{1}{3^4}+\frac{1}{4^4}+\frac{1}{5^4}+\frac{1}{6^4}+\ ...+\frac{1}{n^4}+\ ...=\frac{\pi^4}{90},$
- $1-\frac{1}{2^4}+\frac{1}{3^4}-\frac{1}{4^4}+\frac{1}{5^4}-\frac{1}{6^4}+\ ...\pm\frac{1}{n^4}\mp\ ...=\frac{7\cdot\pi^4}{720},$
- $1+\frac{1}{3^4}+\frac{1}{5^4}+\frac{1}{7^4}+\frac{1}{9^4}+\frac{1}{11^4}+\ ...+\frac{1}{(2\cdot n+1)^4}+\ ...=\frac{\pi^4}{96}.$