

Unit Fractions

A unit fraction is a fraction with denominator equal to 1. Every unit fraction can be written as the sum as two other unit fractions.

For example $\frac{1}{2} = \frac{1}{3} + \frac{1}{6}$

The proof is quite simple.

Take unit fraction $\frac{1}{n}$.

$$\begin{aligned} \frac{1}{n+1} + \frac{1}{n(n+1)} &= \frac{n}{n(n+1)} + \frac{1}{n(n+1)} \\ &= \frac{n+1}{n(n+1)} \\ &= \frac{1}{n} \end{aligned}$$