

$$\vdash \lim_{N \rightarrow \infty} \sum_{n=1}^N \frac{1}{n(n+1)} = 1$$


 $h_{00}$ 

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 $h_{00}, h_{000}$ 

$$\vdash \lim_{N \rightarrow \infty} \sum_{n=1}^N \frac{1}{n(n+1)} = 1$$


 $h_{000}$ 

$$\vdash \lim_{N \rightarrow \infty} \left(1 - \frac{1}{N+1}\right) = 1$$



$$\vdash h_{00} : \sum_{n=1}^N \left(\frac{1}{n} - \frac{1}{n+1}\right) = 1 - \frac{1}{N+1}$$



$$\vdash h_{000} : \frac{1}{n} - \frac{1}{n+1} = \frac{1}{n(n+1)}$$