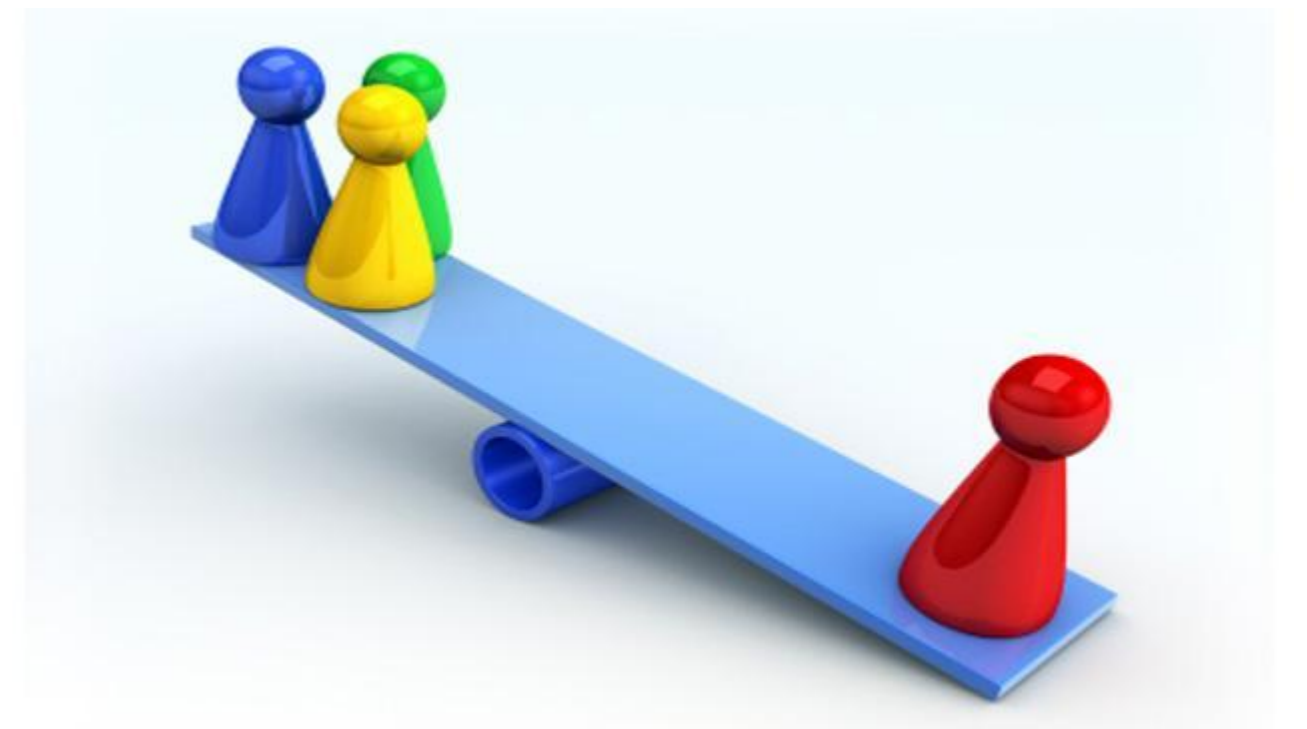


Докажите неравенство:

$$\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \dots + \frac{1}{99 \times 100} < 1$$



$$\frac{1}{1 \cdot 2} = \frac{1}{1} - \frac{1}{2}$$

$$\frac{1}{2 \cdot 3} = \frac{1}{2} - \frac{1}{3}$$

$$\frac{1}{3 \cdot 4} = \frac{1}{3} - \frac{1}{4}$$

$$\frac{1}{n \cdot (n+1)} = \frac{1}{n} - \frac{1}{n+1}$$

$$(1 - \frac{1}{2}) + (\frac{1}{2} - \frac{1}{3}) + (\frac{1}{3} - \frac{1}{4}) + (\frac{1}{4} - \frac{1}{5}) + (\frac{1}{5} - \frac{1}{6}) + \dots + (\frac{1}{99} - \frac{1}{100}) < 1$$
$$1 - \frac{1}{100} < 1$$