

$$\bar{T}_n = a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{\dots + \frac{1}{a_{n-1} + \frac{1}{a_n}}}}} \Rightarrow a_0 = \sum_{k=1}^n a_k; a_k = k, k > 0$$

$$\{\bar{T}_n\}_{n=1}^{\infty} = \left\{ 2, \frac{11}{3}, \frac{67}{10}, \frac{460}{43}, \frac{3532}{225}, \frac{30225}{1393}, \frac{286289}{9976}, \frac{2979896}{81201}, \frac{33852226}{740785}, \dots \right\}$$

$$\bar{T}_1 = 2 = 1 + \frac{1}{1} \Rightarrow 1 = 1$$



$$\bar{T}_2 = \frac{11}{3} = 3 + \frac{1}{1 + \frac{1}{2}} \Rightarrow 1 + 2 = 3$$



$$\bar{T}_3 = \frac{67}{10} = 6 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3}}} \Rightarrow 1 + 2 + 3 = 6$$



$$\bar{T}_4 = \frac{460}{43} = 10 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{4}}}} \Rightarrow 1 + 2 + 3 + 4 = 10$$



$$\bar{T}_5 = \frac{3532}{225} = 15 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{4 + \frac{1}{5}}}}} \Rightarrow 1 + 2 + 3 + 4 + 5 = 15$$



$$\bar{T}_6 = \frac{30225}{1393} = 21 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{4 + \frac{1}{5 + \frac{1}{6}}}}} \Rightarrow 1 + 2 + 3 + 4 + 5 + 6 = 21$$



$$\bar{T}_7 = \frac{286289}{9976} = 28 + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + \frac{1}{4 + \frac{1}{5 + \frac{1}{6 + \frac{1}{7}}}}} \Rightarrow 1 + 2 + 3 + 4 + 5 + 6 + 7 = 28$$

