

Legyen N pozitív egész. Bizonyítsuk be, hogy

$$\left\lfloor \frac{N^2}{1^2} \right\rfloor + \left\lfloor \frac{N^2}{2^2} \right\rfloor + \cdots + \left\lfloor \frac{N^2}{(N-1)^2} \right\rfloor + \left\lfloor \frac{N^2}{N^2} \right\rfloor = \left\lfloor \frac{N}{\sqrt{1}} \right\rfloor + \left\lfloor \frac{N}{\sqrt{2}} \right\rfloor + \cdots + \left\lfloor \frac{N}{\sqrt{N^2-1}} \right\rfloor + \left\lfloor \frac{N}{\sqrt{N^2}} \right\rfloor.$$