$$[((1-(1+x)^{1-s})\zeta(s))^{z}]_n = 1+f_1(n,1+x) \text{ where } f_k(n,j)=\begin{cases} t_x(j)\cdot j^{-s}\cdot(\frac{z+1}{k}-1)(1+f_{k+1}(\frac{n}{j},1+x))+f_k(n,j+x) & \text{if } n\geq j \\ 0 & \text{if } n<j \end{cases}$$

$$\begin{aligned}
&[((1-(1+x)^{1-s})\zeta(s))^{z}]_n = \\
&\quad 1+ \\
&\quad \binom{z}{1}\cdot \sum_{1+j\cdot x\leq n} t_x(j)(1+j\cdot x)^{-s} \\
&\quad +\binom{z}{2}\cdot \sum_{(1+j\cdot x)(1+k\cdot x)\leq n} t_x(j)\,t_x(k)((1+j\cdot x)(1+k\cdot x))^{-s} \\
&\quad +\binom{z}{3}\ldots
\end{aligned}$$

$$\theta_d(t)=(\lfloor t\rfloor-\lfloor t-d\rfloor)-(1+d)\cdot(\lfloor \frac{t}{1+d}\rfloor-\lfloor \frac{t-d}{1+d}\rfloor)$$

$$f_1(x,1+d) \text{ where } f_k(x,t)=\begin{cases} f_k(x,t+d)+\theta_d(t)\cdot(\frac{1}{k}-f_{k+1}(\frac{x}{t},1+d)) & \text{if } x\geq t \\ 0 & \text{if } x<t \end{cases}$$

$$f(x,1+d) \text{ where } f(x,t)=\begin{cases} f(x,t+d)+\theta_d(t)\cdot(\log t-f(\frac{x}{t},1+d)) & \text{if } x\geq t \\ 0 & \text{if } x<t \end{cases}$$

$$f_d(n)=\sum_{1+t\cdot d\leq n}\theta_d(t)-\frac{1}{2}\cdot\sum_{(1+t\cdot d)(1+u\cdot d)\leq n}\theta_d(t)\theta_d(u)+\frac{1}{3}\cdot\sum_{(1+t\cdot d)(1+u\cdot d)(1+v\cdot d)\leq n}\theta_d(t)\theta_d(u)\theta_d(v)\cdot\ldots$$

$$f_d(n)=\sum_{1+t\cdot d\leq n}\theta_d(t)\cdot\log t-\sum_{(1+t\cdot d)(1+u\cdot d)\leq n}\theta_d(t)\theta_d(u)\cdot\log t+\sum_{(1+t\cdot d)(1+u\cdot d)(1+v\cdot d)\leq n}\theta_d(t)\theta_d(u)\theta_d(v)\cdot\log t-\ldots$$

1. First Example
2. Varying Frequency
3. Varying Amplitude

4. Reflection Formula

5. Harmonic Sum as Smooth Wave + Zeta
6. Where are Zeta Zeros
7. Polynomial as Product of Zeros
8. Harmonic Sum + Prime Counting Using Zeta Zeros