It looks like here I was trying to make recursive definitions for what I would later notate as

$$\lim_{x\to 1}\,[\log((1-x^{(1-(0))})\zeta(0))]_n - H_{\lfloor\frac{\log n}{\log x}\rfloor}$$

and

$$\lim_{s\to 0}\frac{\partial}{\partial s}\lim_{x\to 1}\,[\log((1-x^{1-s})\zeta(s))]_n$$

I've written more about this elsewhere of course.

$$\Delta(n,k)=b^{-1}\sum_{j=b+1}^{\lfloor n\cdot b\rfloor}\alpha(j,\frac{b+1}{b})(\frac{1}{k}-\Delta(\frac{n\cdot b}{j},k+1))$$

$$\lim_{b\to\infty}\Delta(n,1)=\Pi(n)-li(n)+\log\log n+\gamma$$

$$\Delta(n,k,j)=b^{-1}\alpha(j,\frac{b+1}{b})(\frac{1}{k}-\Delta(\frac{n\cdot b}{j},k+1,b+1))+\Delta(n,k,j+1)$$
$$\text{if } n\,b<j,\ \Delta(n,k,j)=0$$

$$\lim_{b\to\infty}\Delta(n,1,b+1)=\Pi(n)-li(n)+\log\log n+\gamma$$

$$\Delta(n)=b^{-1}\sum_{j=b+1}^{\lfloor n\cdot b\rfloor}\alpha(j,\frac{b+1}{b})(\log\frac{j}{b}-\Delta(\frac{n\cdot b}{j}))$$

$$\lim_{b\to\infty}\Delta(n)=\psi(n)-n+1$$

$$\Delta(n,j)=b^{-1}\alpha(j,\frac{b+1}{b})(\log\frac{j}{b}-\Delta(\frac{n\cdot b}{j}),b+1)+\Delta(n,j+1)$$
$$\text{if } n\,b<j,\ \Delta(n,j)=0$$

$$\lim_{b\to\infty}\Delta(n,b+1)=\psi(n)-n+1$$