$$g(n)=f(n)+f(n/2)+f(n/3)+f(n/4)+\ldots$$

$$g(n/2)=f(n/2)+f(n/4)+f(n/6)+f(n/8)+\ldots$$

$$g(n)-g(n/2)=f(n)+f(n/3)+f(n/5)+f(n/7)+\ldots$$

$$g(n/3)=f(n/3)+f(n/6)+f(n/9)+f(n/12)+\ldots$$

$$g(n)-g(n/2)=f(n)+f(n/3)+f(n/5)+f(n/7)+\ldots$$

and so on

$$g(n) = f(n) + f(n-1) + f(n-2) + f(n-3) + f(n-4) + f(n-5) + \ldots$$

$$g(n-1) = f(n-1) + f(n-2) + f(n-3) + f(n-4) + f(n-5) + f(n-6) + \ldots$$

$$g(n) - g(n-1) = f(n)$$

$$g(n)=f(n)+f(2n)+f(3n)+f(4n)+\ldots$$

$$g(2n)=f(2n)+f(4n)+f(6n)+f(8n)+\ldots$$

$$g(n)-g(2n)=f(n)+f(3n)+f(5n)+f(7n)+\ldots$$

$$g(3n)=f(3n)+f(6n)+f(9n)+f(12n)+\ldots$$

$$g(n)-g(2n)-g(3n)=f(n)+f(5n)-f(6n)+f(7n)+\ldots$$

and so on

$$g(n)=\sum_{k=1}^{\infty} d_1(k)\cdot f\left(\frac{n}{k}\right)$$

$$f(n)=\sum_{k=1}^{\infty} d_{-1}(k)\cdot g\left(\frac{n}{k}\right)$$

...

$$g(n)=\sum_{k=1}^{\infty} f\left(\frac{n}{k}\right)$$

$$f(n)=\sum_{k=1}^{\infty} \mu(k)\cdot g\left(\frac{n}{k}\right)$$

...

$$g(n)=\sum_{k=1}^{\infty} \nabla_k \{k^1\}^{*\Sigma}\cdot f\left(\frac{n}{k}\right)$$

$$f(n)=\sum_{k=1}^{\infty} \nabla_k \{k^{-1}\}^{*\Sigma}\cdot g\left(\frac{n}{k}\right)$$

...

$$g(n)=\nabla_1 \{1^1\}^{*\Sigma}\cdot f(n)+\sum_{k=2}^{\infty} \nabla_k \{k^1\}^{*\Sigma}\cdot f\left(\frac{n}{k}\right)$$

$$f(n)=\nabla_1 \{1^{-1}\}^{*\Sigma}\cdot g(n)+\sum_{k=2}^{\infty} \nabla_k \{k^{-1}\}^{*\Sigma}\cdot g\left(\frac{n}{k}\right)$$

...

additive equivalent?
Continuous equivalent?

$$g(n)=f(n)+\int_1^{\infty} \frac{\partial}{\partial k}\{k^1\}^{*\int}\cdot f\left(\frac{n}{k}\right)dk$$

$$f(n)=g(n)+\int_{k=1}^{\infty} \frac{\partial}{\partial k}\{k^{-1}\}^{*\int}\cdot g\left(\frac{n}{k}\right)dk$$

...

$$g(n)=f(n)+\int_1^{\infty} f\left(\frac{n}{k}\right)dk$$

$$f(n)=g(n)-\int_1^{\infty} \frac{1}{j}\cdot g\left(\frac{n}{j}\right)dj$$

(where it converges)

vs

$$g(n) = f(n) + \sum_{k=2}^{\infty} f\left(\frac{n}{k}\right)$$

$$f(n) = g(n) + \sum_{k=2}^{\infty} \mu(k) \cdot g\left(\frac{n}{k}\right)$$

...