For

$$\text{Function}: A(x) = \sum \gamma_i \delta(x - x_i)$$

$$\text{Input}: \{\omega_n = (n + \frac{1}{2})\frac{2\pi}{\beta}\},\ n = 0, .., N-1$$

$$\{G(i\omega_n) = \int_R \frac{A(x)}{i\omega_n - x} dx\} + \text{noise},\ n = 0, .., N-1$$

$$\text{Output}: \text{array}: mesh$$

$$\text{Function}: \widetilde{A}(x)$$

In the process to reconstruct the spectral density function, can we just set the poles of of $\widetilde{A}$ as $\{x_i\},\ i = 0, .., N-1$?

In the barycentric method of ACFlow, it use aaa algorithm to get a rational approximation $\frac{N(z)}{D(z)}$ and get poles from it.

But with this method , you can only get $N/2$ poles as most and they can't be accurately $\{i\omega_n\}$.

So can we directly set poles as $\{\omega_n\}$?