$$\frac{\int k^{2\pi} n}{\int k^{2\pi} n} = \frac{\int (k+m_N) \frac{2\pi}{N} n}{\int 2\pi m_N}$$

$$= \int k^{2\pi} n \cdot \left[ \int 2\pi m_N \right]$$

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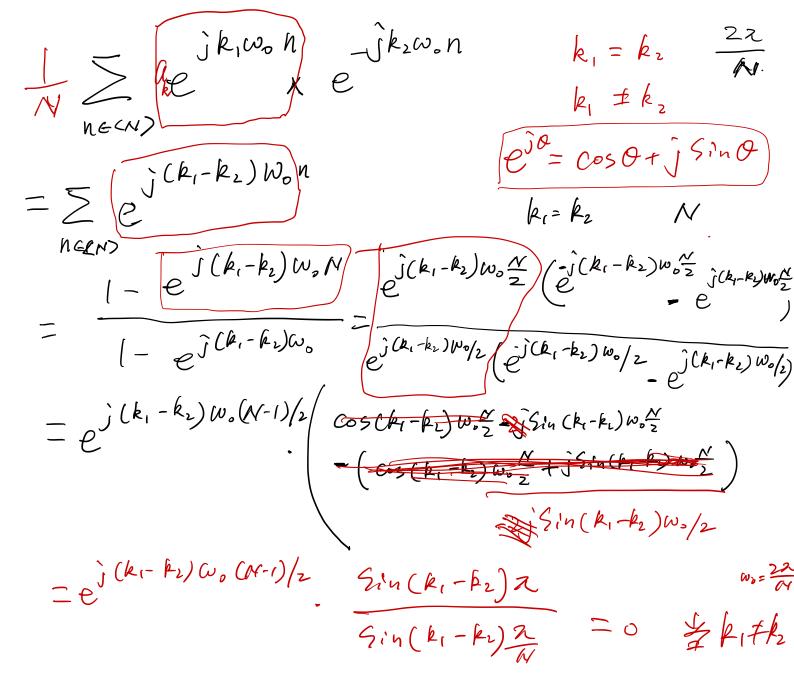
$$= \int k^{2\pi} n \cdot \left[ \int 2\pi m_N \right]$$

$$= \int k^{2\pi} n \cdot \left[ \int 2\pi m_N \right]$$

0 - N-1

N - 201-1

 $\begin{array}{ccc}
Q_{N} & Q_{N-1} \\
Q_{N} & Q_{2N-1}
\end{array}$ 



 $fft([a_1, a_1, a_3, ..., b_N])$   $f_1 = f_2$   $f_3$   $f_4 = f_3$   $f_5 = f_5$   $f_7 = f_8$   $f_8 = f_8$