

$$\eta_k = [DF(\cdot) - g\lambda_k DH(\cdot)]\eta_k. \quad (1)$$

$\eta_k \in \mathbb{R}^n$, $k = 1, \dots, N$. G is a matrix defined by $G = [g\lambda_k]$.

$$\eta = [DF(\cdot) - \alpha DH(\cdot)]\eta. \quad (2)$$

$\Psi(\alpha) = \min_{\eta} \{ \langle H, \eta \rangle \mid \eta = [DF(\cdot) - \alpha DH(\cdot)]\eta \}$.
 λ_k is a Lagrange multiplier. $\Psi_* = \min_k \Psi(g\lambda_k)$.
 $\Psi_* > 0$.
 $\eta = -(\eta + \dots)$, $\eta = \dots + 0$. $\eta = 0 + (\dots)$.

$d = \dots$, $X = \dots$.
 $\Psi(\alpha)$ is a function of α .
 $\alpha \rightarrow 0^+$.
 $\Psi(\alpha)$ is a function of α .
 $\alpha \approx 4.1$.
 N .
 $\{a_i\}_{i=1}^N$. G .

$$G = \begin{pmatrix} b_1 & -a_1 & 0 & 0 & \cdots & 0 & -a_N \\ -a_1 & b & -a & 0 & \cdots & 0 & 0 \\ 0 & -a & b & -a & \cdots & 0 & 0 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ -a_N & 0 & 0 & 0 & 0 & -a_{N-1} & b_N \end{pmatrix}, \quad (3)$$

$$b_i = (a_{i-1} + a_i), \quad i = 1, \dots, N.$$

Handwritten musical notation on a page. The notation includes various notes, rests, and symbols. Key elements include:

- Staff notation with notes and stems.
- Dynamic markings: g , $g = 1.4$, $(\alpha = 4.4)$.
- Alphabetic characters: E , G , i .
- Mathematical symbols: \approx .
- Grouping symbols: parentheses $()$, brackets $[]$.

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$b_{k+1}(\xi) = \dots k_{k+1} E_j(\dots)$
 (\dots)
 (\dots)

