$.f : X \to (-\infty, \infty] C X X$

k

x^k

$.g_k$

$x C$
x^k

$G_k(x) x \in X$

$g_k C G_k(x) x \in C$

.

$y \in R^I PIJKL(Px, y)KL(y, Px)x \in R^J$
k

x^k

$Px\sum_{i=1}^{I} P_{ij} = 1j$

$k = 1, 2, ...$

$D_{f_2}(x, y)f_2$

$g_k(x) \geq 0h(x)h(x)$

xy

$\nabla f_2 L0 < \gamma \leq 1/L$
$x^k G_k(x)x$

$x^k G_k(x)$

$\{x^k\}f(x)$
$G_k(x) - G_k(x^k) = \frac{1}{2\gamma}\|x - x^k\|_2^2 +$

.

$\hat{x}f(x)x$

$\{G_k(\hat{x}) - G_k(x^k)\}\{g_k(x^k)\}\{f(x^k) - f(\hat{x})\}$

$\{x^k\}\{x^{k_n}\}x^{**}\{x^{k_n-1}\}x^* f(x^*) = f(x^{**}) = f(\hat{x})\hat{x}x^{**}\{G_k(x^{**}) - G_k(x^k)\}\{\|x^* - x^k\|_2^2\}\{x^k\}x^*$
$f(x)C$