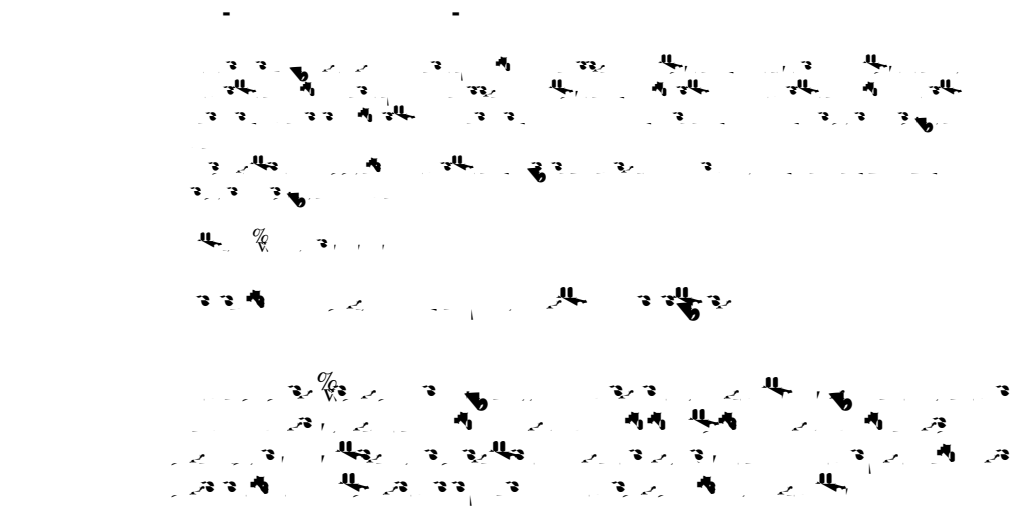
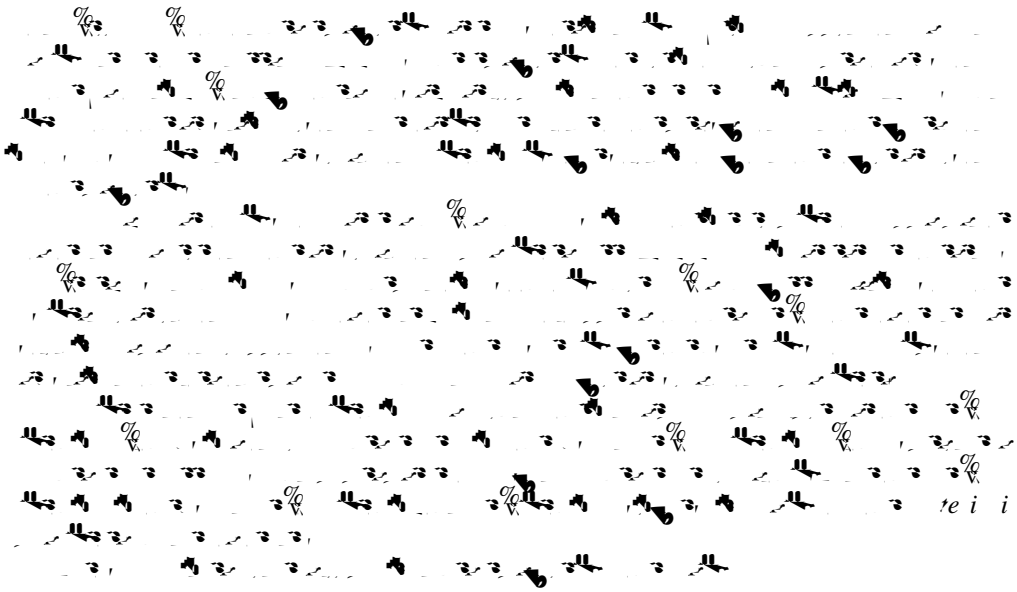
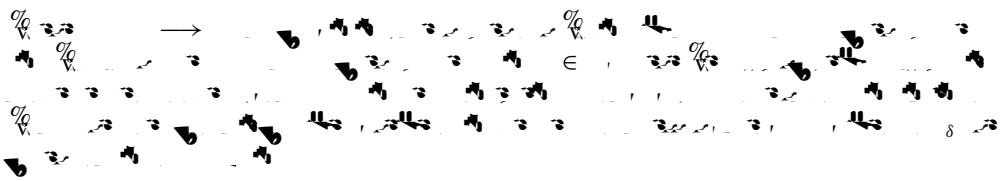


1.

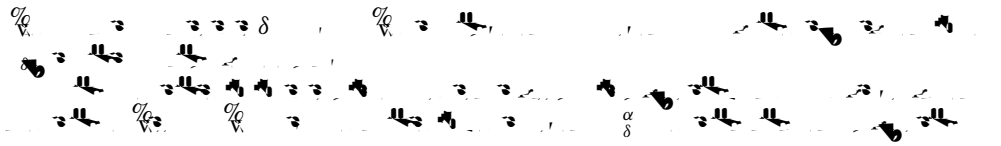


=

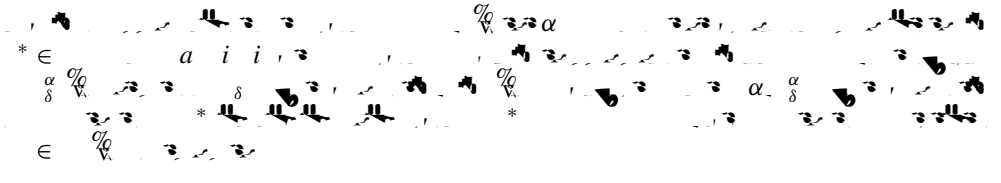
$



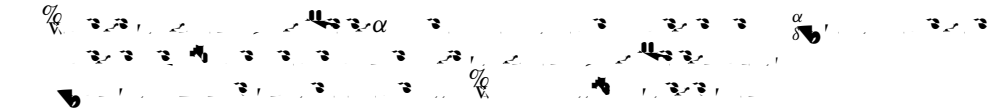
$$\| _{\delta} - \| \leqslant \delta$$



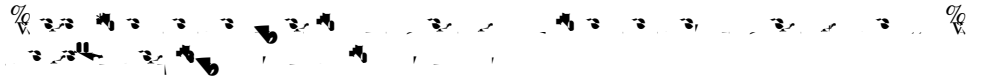
$$^{\alpha}{}_{\delta} = \{\| - {}_{\delta}\| \quad \alpha\| - {}^{*}\| \}$$



$$= \quad \| - {}^{*}\| = \min_{\in} \{\| - {}^{*}\| \quad = \}$$



$$^{*} \quad \alpha \quad - {}^{*} = {}^{*}{}_{\delta} - \quad ^{*}$$

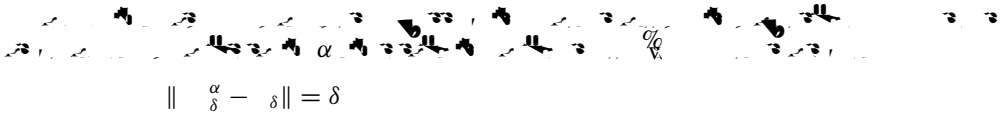


1. *The l ri* $\frac{\alpha}{\delta}$ *f he E le e ari (5) i i itel diffe e riable a e e* α , *which ari e he f ll wi g e ari :*

$$^{*} \quad \alpha \frac{^{\alpha}_{\delta}}{\alpha} = - {}^{\alpha}_{\delta} - {}^{*}$$

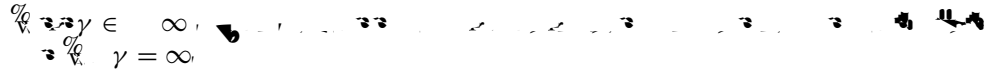
$$^{*} \quad \alpha \frac{^{\alpha}_{\delta}}{\alpha} = - \frac{^{-} {}^{\alpha}_{\delta}}{\alpha^{-}} \qquad =$$

2.



$$\| \frac{\alpha}{\delta} - {}_{\delta}\| = \delta$$

$$\| \frac{\alpha}{\delta} - {}_{\delta}\| \quad \alpha^{\gamma} \| \frac{\alpha}{\delta}\| = \delta$$



α

$$\alpha = \| \overset{\alpha}{\delta} - \ _{\delta} \| - \delta$$

$$\alpha = \| \overset{\alpha}{\delta} - \ _{\delta} \| \quad \alpha^{\gamma} \| \overset{\alpha}{\delta} \| - \delta$$

α **1-3 3 .(-3 . -3 3 .(((3 3 .**

1 ( ).

Ste 1. α δ ϵ δ $*$ $=$

Ste 2.

Ste 3. α $'\alpha$ $''\alpha$

Ste 4. α

Ste 5. $|\alpha - \alpha| \leqslant \epsilon$ $=$ $=$

$$\alpha = \alpha - \frac{\alpha}{'\alpha} \qquad - \alpha$$

$\alpha = \frac{''\alpha \quad \alpha}{'\alpha}$,

$$\alpha = \alpha - \frac{\alpha}{'\alpha} \quad \alpha$$

$\alpha = \frac{}{- \alpha}$,

$$\alpha = \alpha$$

α α α^* $\alpha \in$ $\alpha^* =$ $\alpha^* =$ $- \alpha$ $\alpha \in$ $\alpha^* \epsilon$ ϵ α^* $''\alpha$ $- \alpha = - \frac{''\alpha \quad \alpha}{'\alpha}$ $\alpha^* \epsilon$ ϵ

3. *Let* $\alpha = \alpha$ *be a ite ati ce , if* $\alpha =$ *a e c ti at* $\alpha^* \epsilon$ *, a d*

$$'\alpha^* = ''\alpha^* = \cdots = \; ^{-}\alpha^* = \qquad \alpha^* \neq$$

the the ite ati ce i th de c ve ge t at $\alpha^* \epsilon$ *.*

. *A e that e ati (10) (11) have a t at* $\alpha = \alpha^*$*, i.e.* $\alpha^* =$ *, the* $\exists$ $\alpha^* \epsilon$ *a d* ϵ *, ch that* $\forall \alpha \in$ $\alpha^* \epsilon$ *, the e e ce* $\{\alpha\}^{\infty}_{=}$ *ge e ated b the ab ve alg ith i l call c bicall c ve ge t.*

α α $\alpha^* \epsilon$ $\alpha = \frac{\alpha}{'\alpha}$

$$'\alpha = - \alpha$$

[illegible]

′ α^*

*

α

Ste 3. α

$$\alpha - \alpha' \alpha = \delta$$

Ste 4. $|\alpha - \alpha| \leqslant \epsilon$ =

$$= \frac{\alpha' \alpha}{\alpha - \alpha' \alpha} \qquad = \frac{\alpha}{\alpha - \alpha' \alpha}$$

$\delta \in$ *

3 ( ).

Ste 1. α

Ste 2. α α

2. α

.

$$= \int_{--}^{-} \quad = \quad \in \left[-- \; - \right]$$

$$= \quad \left(\frac{}{} \right) \quad =$$

$$= \quad - \quad - \quad - \quad$$

{ } = -- -

$\times$ { } = -- -

$$= \sum_{=}$$

1.

	α^*	$\|\alpha^*_\delta - \|$	$\|\alpha^*_\delta - _\delta\|$ $\|_\delta\|$
%			

2.

3. γ

γ	α^*	$\| \hat{\alpha}^*_\delta - \|$	$\| \hat{\alpha}^*_\delta - \delta \| \| \delta \|$
∞			

. %

δ

	$\delta =$ %		$\delta =$ %		$\delta =$ %	
		$\| \hat{\alpha}^*_\delta - \|$		$\| \hat{\alpha}^*_\delta - \|$		$\| \hat{\alpha}^*_\delta - \|$
%						

γ γ %

$\gamma =$

$\| \hat{\alpha}^*_\delta - \|$

%

%

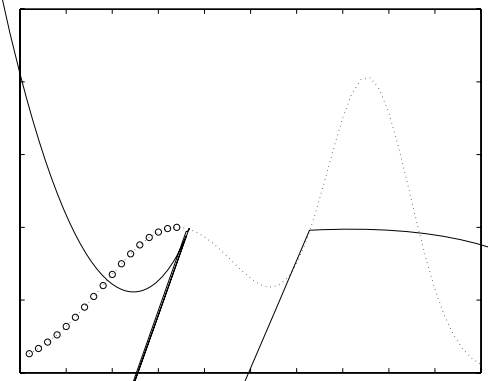
γ $\alpha =$ $\delta =$ $\times$ $^{-}$ $=$ $=$

%

$=$ $=$ $\in$

% $=$ $-$ $=$ ——

$=$ ∞ $=$ $-$ ∞ %

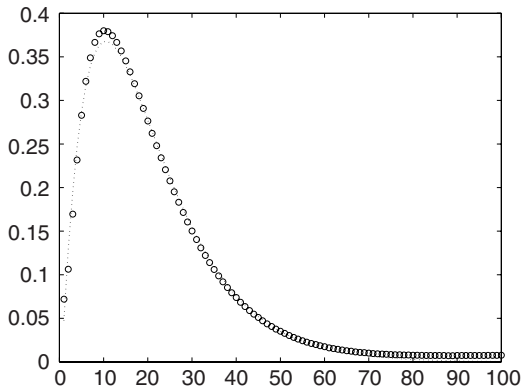


. % $\alpha =$

$\tilde{\delta}$	%	%	%	%	%
α^*					
$\| \alpha^*_\delta - \|$					
$\frac{\| \alpha^*_\delta - \delta\|}{\| \delta\|}$					

. γ $\hat{\delta} =$ % $\alpha =$

γ	α^*	$\| \alpha^*_\delta - \|$	$\| \alpha^*_\delta - \delta\| \, \| \delta\|$
∞			



2.

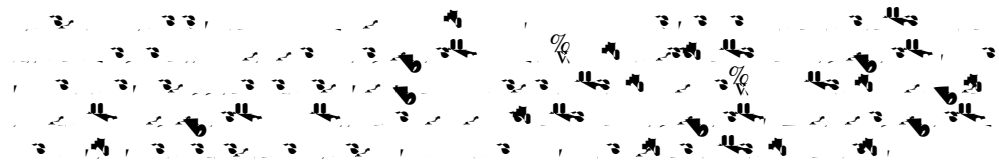
γ % % γ

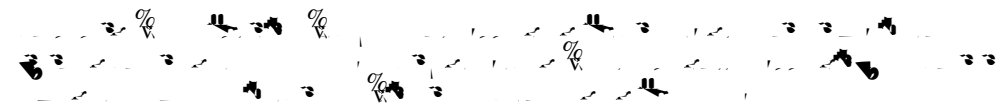
% γ $\alpha =$ $\hat{\delta} =$ % = =

.

% % α % α

% %





BIT **1**

BIT **2**

Reg la i a i f I e e P ble

The The f Tikh Reg la i a i f F edh l E a i f he Fi Ki d

I e e P ble i he Ma he a ical Scie ce

I e e P ble

C i g **0**

I e e P ble **1**

Me h d f S l i g I c ec l P ed P ble

J. Ma h. A al. A l. **3**

S l i f Ill-P ed P ble

N e ical Me h d f he S l i f Ill-P ed P ble

SIAM J. N e . A al. **10**