Step	Algorithm: $[y] := AXPY\_UNB\_VAR2(\alpha, x, y)$
1a	$   \{y = \widehat{y}   \}   $
4	$x \to \left(\frac{x_T}{x_B}\right), y \to \left(\frac{y_T}{y_B}\right)$ where $x_B$ has 0 rows, $y_B$ has 0 rows
2	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$
3	while $m(x_B) < m(x)$ do
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land m(x_B) < m(x) \right\}$
5a	$\left(\frac{x_T}{x_B}\right) \to \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \to \left(\frac{y_0}{\psi_1}\right)$ where $\chi$ has 1 raw $\chi$ has 1 raw
6	where $\chi_1$ has 1 row, $\psi_1$ has 1 row $\{$
0	update line 1
8	;
	update line n
7	<b>{</b>
5b	$\left(\frac{x_T}{x_B}\right) \leftarrow \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \leftarrow \left(\frac{y_0}{\psi_1}\right)$
2	$\left\{ \qquad \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$
	endwhile
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \neg (m(x_B) < m(x)) \right\}$
1b	$\{[y] = \exp(\alpha, x, \widehat{y})$

Step	Algorithm: $[y] := AXPY\_UNB\_VAR2(\alpha, x, y)$	
1a	{	}
4	where	
2		$\left. \right\}$
3	while do	
2,3		$\left. \right\}$
5a	where	
6		}
8		
7	{	}
5b		
2		$\left. \right\}$
	endwhile	
2,3	$\left\{ \begin{array}{c} \wedge \neg ( \end{array} \right. )$	$igg\}$
1b	{	}

Step	Algorithm: $[y] := AXPY\_UNB\_VAR2(\alpha, x, y)$
1a	$\{y=\widehat{y}$
4	where
2	
3	while do
2,3	
5a	where
6	<b>\{</b>
8	
7	<b>\</b> {
5b	
2	$igg  \left\{$
	endwhile
2,3	$\left\{ \begin{array}{ccc} & & & \\ & & & \\ & & & \\ \end{array} \right.$
1b	$\{[y] = \exp(\alpha, x, \widehat{y})$

Step	Algorithm: $[y] := AXPY\_UNB\_VAR2(\alpha, x, y)$
1a	$\{y = \widehat{y} $
4	where
2	$\left\{ \begin{pmatrix} \frac{y_T}{y_B} \end{pmatrix} = \begin{pmatrix} \widehat{y}_T \\ \widehat{y}_B \end{pmatrix} \right\}$
3	while do
2,3	$\left\{ \qquad \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \qquad \qquad \right\}$
5a	where
6	{
8	
7	<b>{</b>
5b	
2	$\left\{ \qquad \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$
	endwhile
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \neg ( ) \right\}$
1b	$\{[y] = \exp(\alpha, x, \widehat{y}) $

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3	while $m(x_B) < m(x)$ do
2,3	$\left\{ \qquad \left(\frac{y_T}{y_B}\right) = \left(\frac{\widehat{y}_T}{\widehat{y}_B}\right) \wedge m(x_B) < m(x) \right\}$
5a	where
6	{
8	
7	<b>{</b>
5b	
2	$\left\{ \qquad \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$
	endwhile
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \neg (m(x_B) < m(x)) \right\}$
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2	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$	
3	while $m(x_B) < m(x)$ do	
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land m(x_B) < m(x) \right\}$	
5a		
G	where	1
6		}
8		
0		
7	{	}
5b		
2	$\left\{ \qquad \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \right.$	
	endwhile	
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \neg (m(x_B) < m(x)) \right\}$	
1b	$\{[y] = \exp(\alpha, x, \hat{y})$	}

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1a	
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2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land m(x_B) < m(x) \right\}$
5a	$ \begin{pmatrix} \frac{x_T}{x_B} \end{pmatrix} \to \begin{pmatrix} x_0 \\ \frac{\chi_1}{x_2} \end{pmatrix}, \begin{pmatrix} \frac{y_T}{y_B} \end{pmatrix} \to \begin{pmatrix} y_0 \\ \frac{\psi_1}{y_2} \end{pmatrix} $ where $\chi_1$ has 1 row, $\psi_1$ has 1 row
6	{
8	
7	{
5b	$\left(\frac{x_T}{x_B}\right) \leftarrow \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \leftarrow \left(\frac{y_0}{\psi_1}\right)$ $\left(\frac{y_0}{\chi_2}\right)$
2	$\left\{ egin{array}{c} \left(rac{y_T}{y_B} ight) = \left(rac{\widehat{y}_T}{\widehat{y}_B} ight) \end{array}  ight.$
	endwhile
2,3	$\left\{ \left( \frac{y_T}{y_B} \right) = \left( \frac{\widehat{y}_T}{\widehat{y}_B} \right) \land \neg (m(x_B) < m(x)) \right\}$
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6	{
8	
7	{
5b	$\left(\frac{x_T}{x_B}\right) \leftarrow \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \leftarrow \left(\frac{y_0}{\psi_1}\right)$
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6	{
8	
7	{
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2	where $x_B$ has 0 rows, $y_B$ has 0 rows $ \left\{ \begin{pmatrix} y_T \\ y_B \end{pmatrix} = \begin{pmatrix} \widehat{y}_T \\ \widehat{y}_B \end{pmatrix} \right\} $
3	while $m(x_B) < m(x)$ do
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6	where $\chi_1$ has 1 row, $\psi_1$ has 1 row $\{$
	update line 1
8	
	update line n
7	{
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Algorithm: $[y] := AXPY\_UNB\_VAR2(\alpha, x, y)$
$x \to \left(\frac{x_T}{x_B}\right), y \to \left(\frac{y_T}{y_B}\right)$ where $x_B$ has 0 rows, $y_B$ has 0 rows
while $m(x_B) < m(x)$ do
$ \left(\frac{x_T}{x_B}\right) \to \left(\frac{x_0}{\chi_1}\right),  \left(\frac{y_T}{y_B}\right) \to \left(\frac{y_0}{\psi_1}\right) $ where $\chi_1$ has 1 row, $\psi_1$ has 1 row
update line 1
update line n
$\left(\frac{x_T}{x_B}\right) \leftarrow \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \leftarrow \left(\frac{y_0}{\psi_1}\right)$
endwhile

 ${\color{red} \textbf{Algorithm:}} \ [y] := \texttt{AXPY\_UNB\_VAR2}(\alpha, x, y)$ 

$$x o \left(\frac{x_T}{x_B}\right), y o \left(\frac{y_T}{y_B}\right)$$

where  $x_B$  has 0 rows,  $y_B$  has 0 rows while  $m(x_B) < m(x)$  do

$$\left(\frac{x_T}{x_B}\right) \to \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \to \left(\frac{y_0}{\psi_1}\right)$$

where  $\chi_1$  has 1 row,  $\psi_1$  has 1 row

update line 1

:

update line n

$$\left(\frac{x_T}{x_B}\right) \leftarrow \left(\frac{x_0}{\chi_1}\right), \left(\frac{y_T}{y_B}\right) \leftarrow \left(\frac{y_0}{\psi_1}\right)$$

endwhile