Step	Algorithm: $[y] := \text{AXPY\_UNB\_VAR2}(\alpha, x, y)$
1a	$\{ y = \widehat{y}$ $\}$
4	$x \rightarrow \left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right)$, $y \rightarrow \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right)$ where x_B has 0 rows, y_B has 0 rows
2	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array}\right) \right\}$
3	while $m(x_B) < m(x)$ do
2,3	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array}\right) \wedge m(x_B) < m(x) \right\}$
5a	$\left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right) \rightarrow \left(\begin{array}{c} x_0 \\ \hline \chi_1 \\ \hline x_2 \end{array}\right)$, $\left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) \rightarrow \left(\begin{array}{c} y_0 \\ \hline \psi_1 \\ \hline y_2 \end{array}\right)$ where χ_1 has 1 row, ψ_1 has 1 row
6	$\{$ $\}$
8	update line 1 : update line n
7	$\{$ $\}$
5b	$\left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right) \leftarrow \left(\begin{array}{c} x_0 \\ \hline \chi_1 \\ \hline x_2 \end{array}\right)$, $\left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) \leftarrow \left(\begin{array}{c} y_0 \\ \hline \psi_1 \\ \hline y_2 \end{array}\right)$
2	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array}\right) \right\}$
	endwhile
2,3	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array}\right) \wedge \neg(m(x_B) < m(x)) \right\}$
1b	$\{[y] = \text{axpy}(\alpha, x, \widehat{y})$ $\}$

Step	Algorithm: $[y] := \text{AXPY\_UNB\_VAR2}(\alpha, x, y)$
1a	{ }
4	where
2	
3	while do
2,3	$\wedge$
5a	where
6	{ }
8	
7	{ }
5b	
2	
	endwhile
2,3	$\wedge \neg($)
1b	{ }

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3	while do
2,3	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array} \right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array} \right) \wedge \right.$
5a	where
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	
2	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array} \right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array} \right) \right.$
	endwhile
2,3	$\left\{ \left(\begin{array}{c} y_T \\ \hline y_B \end{array} \right) = \left(\begin{array}{c} \widehat{y}_T \\ \hline \widehat{y}_B \end{array} \right) \wedge \neg(\quad) \right.$
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8	
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$$x \rightarrow \left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right), \; y \rightarrow \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right)$$

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where χ_1 has 1 row, ψ_1 has 1 row

update line 1

:

update line n

$$\left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right) \leftarrow \left(\begin{array}{c} x_0 \\ \hline \chi_1 \\ \hline x_2 \end{array}\right), \; \left(\begin{array}{c} y_T \\ \hline y_B \end{array}\right) \leftarrow \left(\begin{array}{c} y_0 \\ \hline \psi_1 \\ \hline y_2 \end{array}\right)$$

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