Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}$	}
4	$A \to \left(\begin{array}{c c} A_L & A_R \end{array} \right), \ x \to \left(\begin{array}{c} x_T \\ \hline x_B \end{array} \right)$ where A_L has 0 columns, x_T has 0 rows	
2	$\{y = A_L x_T + \widehat{y}$	}
3	while $n(A_L) < n(A)$ do	
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A)$	}
5a	$\left(\begin{array}{c c} A_L & A_R \end{array}\right) \rightarrow \left(\begin{array}{c c} A_0 & a_1 \end{array}\right), \left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right) \rightarrow \left(\begin{array}{c} x_0 \\ \hline \chi_1 \\ x_2 \end{array}\right)$	
-	where a_1 has 1 column, χ_1 has 1 row	_
6	$\{ y = A_0 x_0 + \widehat{y} $	}
8	$y = \chi_1 a_1 + y$	
7	$\{ \qquad y = A_0 x_0 + \chi_1 a_1 + \widehat{y}$	}
5b	$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_1} \right)$	
2	$\{ \qquad y = A_L x_T + \widehat{y}$	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))$	}
1b	$\{y = Ax + \widehat{y}$	}

Step	Algorithm: $y := Ax + y$
1a	{
4	where
2	{
3	while do
2,3	{
5a	where
6	{
8	
7	{
5b	
2	{
	endwhile
2,3	{
1b	{

Step	Algorithm: $y := Ax + y$
1a	$\{y = \widehat{y}\}$
4	
	where
2	{
3	while do
2,3	 {
5a	where
6	{
8	
7	{
5b	
2	{
	endwhile
2,3	{
1b	$\{y = Ax + \widehat{y} $

Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}\}$	}
4	where	
2	$\{y = A_L x_T + \widehat{y} $	}
3	while do	
2,3	$\{ y = A_L x_T + \widehat{y} \land $	}
5a	where	
6	{	}
8		
7	{	}
5b		
2	$\{ \qquad y = A_L x_T + \widehat{y} $	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg ($	}
1b	$y = Ax + \hat{y}$	}

Step	Algorithm: $y := Ax + y$
1a	$\{y = \hat{y}\}$
4	
	where
2	$\{y = A_L x_T + \widehat{y} $
3	while $n(A_L) < n(A)$ do
2,3	$\{ y = A_L x_T + \widehat{y} \wedge \underline{n}(A_L) < \underline{n}(A) $
5a	where
6	{
8	
7	{
5b	
2	$\{ \qquad y = A_L x_T + \widehat{y} $
	endwhile
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))\}$
1b	$\{y = Ax + \widehat{y} $

Step	Algorithm: $y := Ax + y$
1a	$\{y = \widehat{y} $
4	$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows
2	$\left\{ y = A_L x_T + \widehat{y} \right\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A) $
5a	where
6	{
8	
7	{
5b	
2	$\{ \qquad y = A_L x_T + \widehat{y} $
	endwhile
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))\}$
1b	$\{y = Ax + \widehat{y} $

Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}$	}
4	$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows	
2	$\{y = A_L x_T + \widehat{y}$	}
3	while $n(A_L) < n(A)$ do	
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A)$	}
5a	$\begin{pmatrix} A_L \mid A_R \end{pmatrix} \to \begin{pmatrix} A_0 \mid a_1 \mid A_2 \end{pmatrix}, \begin{pmatrix} \frac{x_T}{x_B} \end{pmatrix} \to \begin{pmatrix} \frac{x_0}{\chi_1} \\ x_2 \end{pmatrix}$ where a_1 has 1 column, χ_1 has 1 row	
6	{	}
8		
7	{	}
5b	$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_1} \right)$	
2	$\{ \qquad y = A_L x_T + \widehat{y}$	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))\}$	}
1b	$\{y = Ax + \widehat{y}$	}

Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}$	}
4	$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows	
2	$\{y = A_L x_T + \widehat{y}$	}
3	while $n(A_L) < n(A)$ do	<u> </u>
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A) $	}
5a	$\begin{pmatrix} A_L \mid A_R \end{pmatrix} \to \begin{pmatrix} A_0 \mid a_1 \mid A_2 \end{pmatrix}, \begin{pmatrix} \frac{x_T}{x_B} \end{pmatrix} \to \begin{pmatrix} \frac{x_0}{\chi_1} \\ \frac{x_2}{\chi_2} \end{pmatrix}$ where a_1 has 1 column, χ_1 has 1 row	
6	$\{ y = A_0 x_0 + \widehat{y}$	}
8		
7	{	}
5b	$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_2} \right)$	
2	$\{ \qquad y = A_L x_T + \widehat{y}$	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))$	}
1b	$\{y = Ax + \widehat{y}$	}

Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}$	}
4	$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows	
2	$\{y = A_L x_T + \widehat{y}$	}
3	while $n(A_L) < n(A)$ do	
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A)$	}
5a	$\left(\begin{array}{c c} A_L & A_R \end{array}\right) \rightarrow \left(\begin{array}{c c} A_0 & a_1 \end{array}\right), \left(\begin{array}{c} x_T \\ \hline x_B \end{array}\right) \rightarrow \left(\begin{array}{c} x_0 \\ \hline \chi_1 \\ x_2 \end{array}\right)$	
6	where a_1 has 1 column, χ_1 has 1 row $\{ y = A_0 x_0 + \widehat{y} \}$	1
	$y = A_0x_0 + y$	
8		
7	$\{ \qquad y = A_0 x_0 + \chi_1 a_1 + \widehat{y}$	}
5b	$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_2} \right)$	
2	$\{ \qquad y = A_L x_T + \widehat{y}$	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))\}$	}
1b	$\{y = Ax + \widehat{y}$	}

Step	Algorithm: $y := Ax + y$	
1a	$\{y=\widehat{y}$	}
4	$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows	
2	$\{y = A_L x_T + \widehat{y}$	}
3	while $n(A_L) < n(A)$ do	
2,3	$\{ y = A_L x_T + \widehat{y} \wedge n(A_L) < n(A)$	}
5a	$\begin{pmatrix} A_L \mid A_R \end{pmatrix} \to \begin{pmatrix} A_0 \mid a_1 \mid A_2 \end{pmatrix}, \begin{pmatrix} \frac{x_T}{x_B} \end{pmatrix} \to \begin{pmatrix} \frac{x_0}{\chi_1} \\ \frac{x_2}{\chi_2} \end{pmatrix}$ where a_1 has 1 column, χ_1 has 1 row	
6	$\{ y = A_0 x_0 + \widehat{y}$	}
8	$y = \chi_1 a_1 + y$	
7	$\{ \qquad y = A_0 x_0 + \chi_1 a_1 + \widehat{y}$	}
5b	$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_1} \right)$	
2	$\{ \qquad y = A_L x_T + \widehat{y}$	}
	endwhile	
2,3	$\{y = A_L x_T + \widehat{y} \land \neg (n(A_L) < n(A))$	}
1b	$\{y = Ax + \widehat{y}$	}

Algorithm: $y := Ax + y$
$A \to \left(A_L \middle A_R \right), x \to \left(\frac{x_T}{x_B} \right)$ where A_L has 0 columns, x_T has 0 rows
while $n(A_L) < n(A)$ do
$\begin{pmatrix} A_L \mid A_R \end{pmatrix} \to \begin{pmatrix} A_0 \mid a_1 \mid A_2 \end{pmatrix}, \begin{pmatrix} \frac{x_T}{x_B} \end{pmatrix} \to \begin{pmatrix} \frac{x_0}{\chi_1} \\ x_2 \end{pmatrix}$ where a_1 has 1 column, χ_1 has 1 row
$y = \chi_1 a_1 + y$
$A \to \left(A_L \middle A_R \right) \leftarrow \left(A_0 \middle a_1 \middle A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_1} \right)$
endwhile

Algorithm: y := Ax + y

$$A \to \left(A_L \middle| A_R \right), x \to \left(\frac{x_T}{x_B} \right)$$

where A_L has 0 columns, x_T has 0 rows while $n(A_L) < n(A)$ do

$$\left(A_L \middle| A_R \right) \to \left(A_0 \middle| a_1 \middle| A_2 \right), \left(\frac{x_T}{x_B} \right) \to \left(\frac{x_0}{\chi_1} \right)$$

where a_1 has 1 column, χ_1 has 1 row

$$y = \chi_1 a_1 + y$$

$$A \to \left(A_L \middle| A_R \right) \leftarrow \left(A_0 \middle| a_1 \middle| A_2 \right), \left(\frac{x_T}{x_B} \right) \leftarrow \left(\frac{x_0}{x_1} \right)$$

endwhile