Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$A \rightarrow \left(A_L \,\Big\vert\, A_R \right)$, $B \rightarrow \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right)$ where A_L has 0 columns, B_T has 0 rows
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	$\left(A_L \,\Big\vert\, A_R \right) \rightarrow \left(A_0 \,\Big\vert\, a_1 \;\; A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \rightarrow \left(\begin{array}{c} B_0 \\ \hline b_1^T \\ B_2 \end{array} \right)$ where a_1 has 1 column, b_1 has 1 row
6	$\{ \quad C = A_0 B_0 + \widehat{C}$ $\}$
8	$C := a_1 b_1^T + C$
7	$\{ \quad C = A_0 B_0 + a_1 b_1^T + \widehat{C}$ $\}$
5b	$A \rightarrow \left(A_L \,\Big\vert\, A_R \right) \leftarrow \left(A_0 \;\; a_1 \,\Big\vert\, A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ b_1^T \\ \hline B_2 \end{array} \right)$
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{ \qquad \}$
4	where
2	$\{ \qquad \}$
3	while do
2,3	$\left\{ \quad \wedge \quad \right\}$
5a	where
6	$\{ \qquad \}$
8	
7	$\{ \qquad \}$
5b	
2	$\{ \qquad \}$
	endwhile
2,3	$\{ \quad \wedge \neg(\quad) \quad \}$
1b	$\{ \qquad \}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	where
2	$\{$ $\}$
3	while do
2,3	$\left\{ \wedge \right\}$
5a	where
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	
2	$\{$ $\}$
	endwhile
2,3	$\{ \wedge \neg ( ) \}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	where
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while do
2,3	$\left\{ C = A_L B_T + \widehat{C} \wedge \right\}$
5a	where
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	
2	$\{$ $C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg($ $)$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	where
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	where
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$A \rightarrow \left(A_L \,\vert\, A_R \right)$, $B \rightarrow \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right)$ where A_L has 0 columns, B_T has 0 rows
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A) \}$
5a	where
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$A \rightarrow \left(A_L \middle\| A_R \right)$, $B \rightarrow \left(\frac{B_T}{B_B} \right)$ where A_L has 0 columns, B_T has 0 rows
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	$\left(A_L \middle\| A_R \right) \rightarrow \left(A_0 \middle\| a_1 \; A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \rightarrow \begin{pmatrix} B_0 \\ \hline b_1^T \\ B_2 \end{pmatrix}$ where a_1 has 1 column, b_1 has 1 row
6	$\{$ $\}$
8	
7	$\{$ $\}$
5b	$A \rightarrow \left(A_L \middle\| A_R \right) \leftarrow \left(A_0 \; a_1 \middle\| A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \leftarrow \begin{pmatrix} B_0 \\ b_1^T \\ \hline B_2 \end{pmatrix}$
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
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3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	$\left(A_L \middle| A_R \right) \rightarrow \left(A_0 \middle| a_1 \;\; A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \rightarrow \left(\begin{array}{c} B_0 \\ \hline b_1^T \\ B_2 \end{array} \right)$ where a_1 has 1 column, b_1 has 1 row
6	$\{ \quad C = A_0 B_0 + \widehat{C}$ $\}$
8	
7	$\{$ $\}$
5b	$A \rightarrow \left(A_L \middle| A_R \right) \leftarrow \left(A_0 \;\; a_1 \middle| A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ b_1^T \\ \hline B_2 \end{array} \right)$
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$A \rightarrow \left(A_L \,\big|\, A_R \right)$, $B \rightarrow \left(\frac{B_T}{B_B} \right)$ where A_L has 0 columns, B_T has 0 rows
2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	$\left(A_L \,\big|\, A_R \right) \rightarrow \left(A_0 \,\big|\, a_1 \;\; A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \rightarrow \begin{pmatrix} B_0 \\ \hline b_1^T \\ B_2 \end{pmatrix}$ where a_1 has 1 column, b_1 has 1 row
6	$\{ \quad C = A_0 B_0 + \widehat{C}$ $\}$
8	
7	$\{ \quad C = A_0 B_0 + a_1 b_1^T + \widehat{C}$ $\}$
5b	$A \rightarrow \left(A_L \,\big|\, A_R \right) \leftarrow \left(A_0 \;\; a_1 \,\big|\, A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \leftarrow \begin{pmatrix} B_0 \\ b_1^T \\ \hline B_2 \end{pmatrix}$
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
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Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
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2	$\{C = A_L B_T + \widehat{C}$ $\}$
3	while $n(A_L) < n(A)$ do
2,3	$\{ \quad C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A)$ $\}$
5a	$\left(A_L \middle| A_R \right) \rightarrow \left(A_0 \middle| a_1 \; A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \rightarrow \left(\begin{array}{c} B_0 \\ \hline b_1^T \\ B_2 \end{array} \right)$ where a_1 has 1 column, b_1 has 1 row
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5b	$A \rightarrow \left(A_L \middle| A_R \right) \leftarrow \left(A_0 \; a_1 \middle| A_2 \right)$, $\left(\frac{B_T}{B_B} \right) \leftarrow \left(\begin{array}{c} B_0 \\ b_1^T \\ \hline B_2 \end{array} \right)$
2	$\{ \quad C = A_L B_T + \widehat{C}$ $\}$
	endwhile
2,3	$\{C = A_L B_T + \widehat{C} \wedge \neg(n(A_L) < n(A))$ $\}$
1b	$\{C = AB + \widehat{C})$ $\}$

	Algorithm: $C := AB + C$
	$A \rightarrow \left(A_L \,\middle\vert\, A_R \right)$, $B \rightarrow \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right)$ where A_L has 0 columns, B_T has 0 rows
	while $n(A_L) < n(A)$ do
	$\left(A_L \,\middle\vert\, A_R \right) \rightarrow \left(A_0 \,\middle\vert\, a_1 \;\; A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \rightarrow \left(\begin{array}{c} B_0 \\ \hline b_1^T \\ B_2 \end{array} \right)$ where a_1 has 1 column, b_1 has 1 row
	$C := a_1 b_1^T + C$
	$A \rightarrow \left(A_L \,\middle\vert\, A_R \right) \leftarrow \left(A_0 \;\; a_1 \,\middle\vert\, A_2 \right)$, $\left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ b_1^T \\ \hline B_2 \end{array} \right)$
	endwhile

Algorithm: $C := AB + C$

$$A \rightarrow \left(A_L \,\middle|\, A_R \right), \; B \rightarrow \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right)$$

where A_L has 0 columns, B_T has 0 rows

while $n(A_L) < n(A)$ **do**

$$\left(A_L \,\middle|\, A_R \right) \rightarrow \left(A_0 \,\middle|\, a_1 \;\; A_2 \right), \; \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \rightarrow \left(\begin{array}{c} B_0 \\ \hline b_1^T \\ B_2 \end{array} \right)$$

where a_1 has 1 column, b_1 has 1 row

$C := a_1 b_1^T + C$

$$A \rightarrow \left(A_L \,\middle|\, A_R \right) \leftarrow \left(A_0 \;\; a_1 \,\middle|\, A_2 \right), \; \left(\begin{array}{c} B_T \\ \hline B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ b_1^T \\ \hline B_2 \end{array} \right)$$

endwhile