Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$A \rightarrow \left(\frac{A_T}{A_B}\right)$, $C \rightarrow \left(\frac{C_T}{C_B}\right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \wedge m(A_B) < m(A) \right\}$
5a	$\left(\frac{A_T}{A_B}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right)$, $\left(\frac{C_T}{C_B}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$ where a_1 has 1 row, c_1 has 1 row
6	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
8	$c_1^T := a_1^T B + c_1^T$
7	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ a_1^T B + \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
5b	$\left(\frac{A_T}{A_B}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right)$, $\left(\frac{C_T}{C_B}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$
2	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \right\}$
	endwhile
2,3	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{C = AB + \widehat{C})$ $\}$

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

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

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

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	where
2	$\left\{ \left(\dfrac{C_T}{C_B} \right) = \left(\dfrac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\dfrac{C_T}{C_B} \right) = \left(\dfrac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge m(A_B) < m(A) \right\}$
5a	where
6	$\left\{ \right\}$
8	
7	$\left\{ \right\}$
5b	
2	$\left\{ \left(\dfrac{C_T}{C_B} \right) = \left(\dfrac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
	endwhile
2,3	$\left\{ \left(\dfrac{C_T}{C_B} \right) = \left(\dfrac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$A \rightarrow \left(\frac{A_T}{A_B} \right)$, $C \rightarrow \left(\frac{C_T}{C_B} \right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge m(A_B) < m(A) \right\}$
5a	where
6	$\left\{ \right\}$
8	
7	$\left\{ \right\}$
5b	
2	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
	endwhile
2,3	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C} \qquad \}$
4	$A \rightarrow \left(\frac{A_T}{A_B}\right), C \rightarrow \left(\frac{C_T}{C_B}\right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \wedge m(A_B) < m(A) \right\}$
5a	$\left(\frac{A_T}{A_B}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right), \left(\frac{C_T}{C_B}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$ where a_1 has 1 row, c_1 has 1 row
6	$\left\{ \qquad \right\}$
8	
7	$\left\{ \qquad \right\}$
5b	$\left(\frac{A_T}{A_B}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right), \left(\frac{C_T}{C_B}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$
2	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \right\}$
	endwhile
2,3	$\left\{ \left(\frac{C_T}{C_B}\right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B}\right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{C = AB + \widehat{C}) \qquad \}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$A \rightarrow \left(\frac{A_T}{A_B} \right), C \rightarrow \left(\frac{C_T}{C_B} \right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge m(A_B) < m(A) \right\}$
5a	$\left(\frac{A_T}{A_B} \right) \rightarrow \begin{pmatrix} A_0 \\ a_1^T \\ \hline A_2 \end{pmatrix}, \left(\frac{C_T}{C_B} \right) \rightarrow \begin{pmatrix} C_0 \\ c_1^T \\ \hline C_2 \end{pmatrix}$ where a_1 has 1 row, c_1 has 1 row
6	$\left\{ \begin{pmatrix} C_0 \\ c_1^T \\ C_2 \end{pmatrix} = \begin{pmatrix} \widehat{C}_0 \\ \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{pmatrix} \right\}$
8	
7	$\{ \}$
5b	$\left(\frac{A_T}{A_B} \right) \leftarrow \begin{pmatrix} A_0 \\ \hline a_1^T \\ A_2 \end{pmatrix}, \left(\frac{C_T}{C_B} \right) \leftarrow \begin{pmatrix} C_0 \\ \hline c_1^T \\ C_2 \end{pmatrix}$
2	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \right\}$
	endwhile
2,3	$\left\{ \left(\frac{C_T}{C_B} \right) = \left(\frac{\widehat{C}_T}{A_B B + \widehat{C}_B} \right) \wedge \neg (m(A_B) < m(A)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$A \rightarrow \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right), C \rightarrow \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \wedge m(A_B) < m(A) \right\}$
5a	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right), \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$ where a_1 has 1 row, c_1 has 1 row
6	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
8	
7	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ a_1^T B + \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
5b	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right), \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$
2	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \right\}$
	endwhile
2,3	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$A \rightarrow \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right)$, $C \rightarrow \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right)$ where A_B has 0 rows, C_B has 0 rows
2	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \right\}$
3	while $m(A_B) < m(A)$ do
2,3	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \wedge m(A_B) < m(A) \right\}$
5a	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right)$, $\left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$ where a_1 has 1 row, c_1 has 1 row
6	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
8	$c_1^T := a_1^T B + c_1^T$
7	$\left\{ \left(\begin{array}{c} C_0 \\ c_1^T \\ C_2 \end{array}\right) = \left(\begin{array}{r} \widehat{C}_0 \\ a_1^T B + \widehat{c}_1^T \\ A_2 B + \widehat{C}_2 \end{array}\right) \right\}$
5b	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right)$, $\left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$
2	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \right\}$
	endwhile
2,3	$\left\{ \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) = \left(\begin{array}{r} \widehat{C}_T \\ \hline A_B B + \widehat{C}_B \end{array}\right) \wedge \neg(m(A_B) < m(A)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

	Algorithm: $C := AB + C$
	$A \rightarrow \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right)$, $C \rightarrow \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right)$ where A_B has 0 rows, C_B has 0 rows
	while $m(A_B) < m(A)$ do
	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right)$, $\left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$ where a_1 has 1 row, c_1 has 1 row
	$c_1^T := a_1^T B + c_1^T$
	$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right)$, $\left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$
	endwhile

Algorithm: $C := AB + C$

$$A \rightarrow \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right), C \rightarrow \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right)$$

where A_B has 0 rows, C_B has 0 rows

while $m(A_B) < m(A)$ do

$$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \rightarrow \left(\begin{array}{c} A_0 \\ a_1^T \\ \hline A_2 \end{array}\right), \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \rightarrow \left(\begin{array}{c} C_0 \\ c_1^T \\ \hline C_2 \end{array}\right)$$

where a_1 has 1 row, c_1 has 1 row

$c_1^T := a_1^T B + c_1^T$

$$\left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \leftarrow \left(\begin{array}{c} A_0 \\ \hline a_1^T \\ A_2 \end{array}\right), \left(\begin{array}{c} C_T \\ \hline C_B \end{array}\right) \leftarrow \left(\begin{array}{c} C_0 \\ \hline c_1^T \\ C_2 \end{array}\right)$$

endwhile