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

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

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

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

while $m(A_T) < m(A)$ **do**

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

where a_1 has 1 row, c_1 has 1 row

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

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

endwhile