Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$B \rightarrow \left(B_L \,\middle\|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	$\left(B_L \,\middle\|\, B_R \right) \rightarrow \left(B_0 \;\; b_1 \,\middle\|\, B_2 \right)$, $\left(C_L \,\middle\|\, C_R \right) \rightarrow \left(C_0 \;\; c_1 \,\middle\|\, C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	$c_1 := Ab_1 + c_1$
7	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; Ab_1 + \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
5b	$B \rightarrow \left(B_L \,\middle\|\, B_R \right) \leftarrow \left(B_0 \,\middle\|\, b_1 \;\; B_2 \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right) \leftarrow \left(C_0 \,\middle\|\, c_1 \;\; C_2 \right)$
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
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	$\{ C = \widehat{C} \qquad \}$
4	where
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
3	while do
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge \right\}$
5a	where
6	$\left\{ \qquad \right\}$
8	
7	$\left\{ \qquad \right\}$
5b	
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge \neg(\qquad) \right\}$
1b	$\{ C = AB + \widehat{C}) \qquad \}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	where
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	where
6	$\{ \}$
8	
7	$\{ \}$
5b	
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$B \rightarrow \left(B_L \mid B_R \right)$, $C \rightarrow \left(C_L \mid C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	where
6	$\{ \}$
8	
7	$\{ \}$
5b	
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C} \qquad \}$
4	$B \rightarrow \left(B_L \middle\| B_R \right)$, $C \rightarrow \left(C_L \middle\| C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	$\left(B_L \middle\| B_R \right) \rightarrow \left(B_0 \;\; b_1 \middle\| B_2 \right)$, $\left(C_L \middle\| C_R \right) \rightarrow \left(C_0 \;\; c_1 \middle\| C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\{ \qquad \}$
8	
7	$\{ \qquad \}$
5b	$B \rightarrow \left(B_L \middle\| B_R \right) \leftarrow \left(B_0 \middle\| b_1 \;\; B_2 \right)$, $C \rightarrow \left(C_L \middle\| C_R \right) \leftarrow \left(C_0 \middle\| c_1 \;\; C_2 \right)$
2	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{C = AB + \widehat{C}) \qquad \}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C}$ $\}$
4	$B \rightarrow \left(B_L \,\middle\|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	$\left(B_L \,\middle\|\, B_R \right) \rightarrow \left(B_0 \;\; b_1 \,\middle\|\, B_2 \right)$, $\left(C_L \,\middle\|\, C_R \right) \rightarrow \left(C_0 \;\; c_1 \,\middle\|\, C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	
7	$\{ \}$
5b	$B \rightarrow \left(B_L \,\middle\|\, B_R \right) \leftarrow \left(B_0 \,\middle\|\, b_1 \;\; B_2 \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right) \leftarrow \left(C_0 \,\middle\|\, c_1 \;\; C_2 \right)$
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{C = AB + \widehat{C})$ $\}$

Step	Algorithm: $C := AB + C$
1a	$\{ C = \widehat{C} \}$
4	$B \rightarrow \left(B_L \,\middle|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	$\left(B_L \,\middle|\, B_R \right) \rightarrow \left(B_0 \;\; b_1 \,\middle|\, B_2 \right)$, $\left(C_L \,\middle|\, C_R \right) \rightarrow \left(C_0 \;\; c_1 \,\middle|\, C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	
7	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; Ab_1 + \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
5b	$B \rightarrow \left(B_L \,\middle|\, B_R \right) \leftarrow \left(B_0 \,\middle|\, b_1 \;\; B_2 \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right) \leftarrow \left(C_0 \,\middle|\, c_1 \;\; C_2 \right)$
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{ C = AB + \widehat{C}) \}$

Step	Algorithm: $C := AB + C$
1a	$\{C = \widehat{C} \quad \}$
4	$B \rightarrow \left(B_L \,\middle\|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right)$ where B_R has 0 columns, C_R has 0 columns
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_R) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_R) < n(B) \right\}$
5a	$\left(B_L \,\middle\|\, B_R \right) \rightarrow \left(B_0 \;\; b_1 \,\middle\|\, B_2 \right)$, $\left(C_L \,\middle\|\, C_R \right) \rightarrow \left(C_0 \;\; c_1 \,\middle\|\, C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	$c_1 := Ab_1 + c_1$
7	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; Ab_1 + \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
5b	$B \rightarrow \left(B_L \,\middle\|\, B_R \right) \leftarrow \left(B_0 \,\middle\|\, b_1 \;\; B_2 \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right) \leftarrow \left(C_0 \,\middle\|\, c_1 \;\; C_2 \right)$
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_R) < n(B)) \right\}$
1b	$\{C = AB + \widehat{C}) \quad \}$

	Algorithm: $C := AB + C$
	$B \rightarrow \left(\begin{array}{c\|c} B_L & B_R \end{array} \right)$, $C \rightarrow \left(\begin{array}{c\|c} C_L & C_R \end{array} \right)$ where B_R has 0 columns, C_R has 0 columns
	while $n(B_R) < n(B)$ do
	$\left(\begin{array}{c\|c} B_L & B_R \end{array} \right) \rightarrow \left(\begin{array}{cc\|c} B_0 & b_1 & B_2 \end{array} \right)$, $\left(\begin{array}{c\|c} C_L & C_R \end{array} \right) \rightarrow \left(\begin{array}{cc\|c} C_0 & c_1 & C_2 \end{array} \right)$ where b_1 has 1 column, c_1 has 1 column
	$c_1 := Ab_1 + c_1$
	$B \rightarrow \left(\begin{array}{c\|c} B_L & B_R \end{array} \right) \leftarrow \left(\begin{array}{c\|cc} B_0 & b_1 & B_2 \end{array} \right)$, $C \rightarrow \left(\begin{array}{c\|c} C_L & C_R \end{array} \right) \leftarrow \left(\begin{array}{c\|cc} C_0 & c_1 & C_2 \end{array} \right)$
	endwhile

Algorithm: $C := AB + C$

$B \rightarrow \left(\begin{array}{c|c} B_L & B_R \end{array} \right)$, $C \rightarrow \left(\begin{array}{c|c} C_L & C_R \end{array} \right)$

where B_R has 0 columns, C_R has 0 columns

while $n(B_R) < n(B)$ do

$\left(\begin{array}{c|c} B_L & B_R \end{array} \right) \rightarrow \left(\begin{array}{cc|c} B_0 & b_1 & B_2 \end{array} \right)$, $\left(\begin{array}{c|c} C_L & C_R \end{array} \right) \rightarrow \left(\begin{array}{cc|c} C_0 & c_1 & C_2 \end{array} \right)$

where b_1 has 1 column, c_1 has 1 column

$c_1 := Ab_1 + c_1$

$B \rightarrow \left(\begin{array}{c|c} B_L & B_R \end{array} \right) \leftarrow \left(\begin{array}{c|cc} B_0 & b_1 & B_2 \end{array} \right)$, $C \rightarrow \left(\begin{array}{c|c} C_L & C_R \end{array} \right) \leftarrow \left(\begin{array}{c|cc} C_0 & c_1 & C_2 \end{array} \right)$

endwhile