C4	A1 = -ith = C
Step	Algorithm: $C := AB + C$
1a	$\left\{ C = \widehat{C} \right\}$
4	$A \to \left( A_L \middle  A_R \right), B \to \left( \frac{B_T}{B_B} \right)$ where $A_R$ has 0 columns, $B_B$ has 0 rows
2	$\left\{ C = A_R B_B + \widehat{C} \right\}$
3	while $n(A_R) < n(A)$ do
2,3	$\left\{ C = A_R B_B + \widehat{C} \wedge n(A_R) < n(A) \right\}$
5a	$\left(\begin{array}{c c} A_L & A_R \end{array}\right) \to \left(\begin{array}{c c} A_0 & a_1 & A_2 \end{array}\right), \left(\begin{array}{c} B_T \\ \hline B_B \end{array}\right) \to \left(\begin{array}{c} B_0 \\ \hline B_1 \\ \hline B_2 \end{array}\right)$
	where $a_1$ has 1 column, $b_1$ has 1 row
6	$\left\{ \qquad C = A_2 B_2 + \widehat{C} $
8	$C := a_1 b_1^T + C$
7	$\left\{ C = a_1 b_1^T + A_2 B_2 + \widehat{C} \right\}$
5b	$A \to \left( A_L \middle  A_R \right) \leftarrow \left( A_0 \middle  a_1 \middle  A_2 \right), \left( \frac{B_T}{B_B} \right) \leftarrow \left( \frac{B_0}{b_1^T} \right)$
2	$\left\{ C = A_R B_B + \widehat{C} \right\}$
	endwhile
2,3	$\left\{ C = A_R B_B + \widehat{C} \wedge \neg (n(A_R) < n(A)) \right\}$
1b	$\left\{ C = AB + \widehat{C} \right) $

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

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

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

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

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

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

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

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

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

Algorithm:	C := AB + C
	$A_R$ ), $B \to \left(\frac{B_T}{B_B}\right)$ $B_R$ has 0 columns, $B_B$ has 0 rows
while $n(A_R)$	(n(A)) do
	$(A_R) \rightarrow (A_0 \ a_1   A_2), \left(\frac{B_T}{B_B}\right) \rightarrow \left(\frac{B_0}{B_2}\right)$ $(B_0) \rightarrow \left(\frac{b_1^T}{B_2}\right)$ $(B_1) \rightarrow \left(\frac{b_1^T}{B_2}\right)$ $(B_2) \rightarrow \left(\frac{B_1}{B_2}\right)$ $(B_1) \rightarrow \left(\frac{B_1}{B_2}\right)$ $(B_2) \rightarrow \left(\frac{B_1}{B_2}\right)$ $(B_1) \rightarrow \left(\frac{B_2}{B_2}\right)$ $(B_2) \rightarrow \left(\frac{B_1}{B_2}\right)$ $(B_3) \rightarrow \left(\frac{B_2}{B_2}\right)$ $(B_4) \rightarrow \left(\frac{B_1}{B_2}\right)$ $(B_4) \rightarrow \left(\frac{B_2}{B_2}\right)$ $(B_4) \rightarrow \left(\frac{B_4}{B_2}\right)$ $($
$C:=a_{\overline{z}}$	$ab_1^T + C$
$A  o \left( \ . \right)$	$A_L \mid A_R \rangle \leftarrow \left( A_0 \mid a_1 \mid A_2 \right), \left( \frac{B_T}{B_B} \right) \leftarrow \left( \frac{B_0}{b_1^T} \right)$
endwhile	

Algorithm: C := AB + C

$$A \to \left( A_L \middle| A_R \right), B \to \left( \frac{B_T}{B_B} \right)$$

where  $A_R$  has 0 columns,  $B_B$  has 0 rows while  $n(A_R) < n(A)$  do

$$\left( A_L \middle| A_R \right) \to \left( A_0 \middle| a_1 \middle| A_2 \right), \left( \frac{B_T}{B_B} \right) \to \left( \frac{B_0}{B_1^T} \right)$$

where  $a_1$  has 1 column,  $b_1$  has 1 row

$$C := a_1 b_1^T + C$$

$$A \to \left( A_L \middle| A_R \right) \leftarrow \left( A_0 \middle| a_1 \middle| A_2 \right), \left( \frac{B_T}{B_B} \right) \leftarrow \left( \frac{B_0}{b_1^T} \middle| B_2 \right)$$

endwhile