

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	$\left\{ \begin{array}{l} C = A_L B_T + \widehat{C} \wedge n(A_L) < n(A) \end{array} \right\}$
5a	Determine block size b $\left(A_L \middle A_R \right) \rightarrow \left(A_0 \middle A_1 \ A_2 \right), \left(\frac{B_T}{B_B} \right) \rightarrow \left(\frac{B_0}{B_1} \right)$ where A_1 has b columns, B_1 has b rows
6	$\left\{ \begin{array}{l} C = A_0 B_0 + \widehat{C} \end{array} \right\}$
8	$C := A_1 B_1 + C$
7	$\left\{ \begin{array}{l} C = A_0 B_0 + A_1 B_1 + \widehat{C} \end{array} \right\}$
5b	$A \rightarrow \left(A_L \middle A_R \right) \leftarrow \left(A_0 \ A_1 \middle A_2 \right), \left(\frac{B_T}{B_B} \right) \leftarrow \left(\frac{B_0}{B_1} \right)$
2	$\left\{ \begin{array}{l} C = A_L B_T + \widehat{C} \end{array} \right\}$
	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	{
4	where
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2,3	{ \wedge
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5b	$A \rightarrow \left(A_L \mid A_R \right) \leftarrow \left(A_0 \ A_1 \mid A_2 \right), \left(\begin{array}{c} B_T \\ B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ B_1 \\ B_2 \end{array} \right)$
2	$\left\{ \begin{array}{l} C = A_L B_T + \widehat{C} \end{array} \right\}$
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2	$\{ \quad C = A_L B_T + \widehat{C}$
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	$A \rightarrow \left(A_L \mid A_R \right), B \rightarrow \left(\begin{array}{c} B_T \\ B_B \end{array} \right)$ <p>where A_L has 0 columns, B_T has 0 rows</p>
	while $n(A_L) < n(A)$ do
	<p>Determine block size b</p> $\left(A_L \mid A_R \right) \rightarrow \left(A_0 \mid A_1 \ A_2 \right), \left(\begin{array}{c} B_T \\ B_B \end{array} \right) \rightarrow \left(\begin{array}{c} B_0 \\ B_1 \\ B_2 \end{array} \right)$ <p>where A_1 has b columns, B_1 has b rows</p>
	$C := A_1 B_1 + C$
	$A \rightarrow \left(A_L \mid A_R \right) \leftarrow \left(A_0 \ A_1 \mid A_2 \right), \left(\begin{array}{c} B_T \\ B_B \end{array} \right) \leftarrow \left(\begin{array}{c} B_0 \\ B_1 \\ B_2 \end{array} \right)$
	endwhile

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

where A_L has 0 columns, B_T has 0 rows

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

Determine block size b

$$\left(A_L \left| A_R \right. \right) \rightarrow \left(A_0 \left| A_1 \ A_2 \right. \right), \left(\frac{B_T}{B_B} \right) \rightarrow \left(\frac{B_0}{B_1} \right. \\ \left. B_2 \right)$$

where A_1 has b columns, B_1 has b rows

$$C := A_1 B_1 + C$$

$$A \rightarrow \left(A_L \left| A_R \right. \right) \leftarrow \left(A_0 \ A_1 \left| A_2 \right. \right), \left(\frac{B_T}{B_B} \right) \leftarrow \left(\frac{B_0}{B_1} \right. \\ \left. B_2 \right)$$

endwhile