Step	Algorithm: $C = AB^T + BA^T + \widehat{C}$	
1a	${C = \widehat{C}}$	}
4	$A \to \left(\frac{A_T}{A_B}\right), B \to \left(\frac{B_T}{B_B}\right), C \to \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0 \times 0$	
2	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	$\left.  ight\}$
3	while $m(C_{TL}) < m(C)$ do	
2,3	$ \left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C) $	$igg\}$
5a	Determine block size $b$ $ \left(\frac{A_T}{A_B}\right) \to \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \to \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}}   * \\ C_{BL}   C_{BR}\right) \to \left(\frac{C_{00}}{C_{10}}   * * \\ C_{20}   C_{21}   C_{22}\right) $ where $A_1$ has $b$ rows, $B_1$ has $b$ rows, $C_{11}$ is $b \times b$	
6	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ \widehat{C}_{10}^T & \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $	$\left. \overline{ ight.} \right.$
8	$C_{11} = A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + C_{11}$ $C_{10}^T = A_1 B_0^T + B_1^T A_0^T + C_{10}^T$	
7	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ A_1 B_0^T + B_1^T A_0^T + \widehat{C}_{10}^T & A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $	$\left. \right\}$
5b	$ \left(\frac{A_T}{A_B}\right) \leftarrow \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \leftarrow \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}}   * * * * * * * * * * * * * * * * * *$	
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	$igg\}$
	endwhile	
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land \neg (m(C_{TL}) < m(C))$	
1b	$\{C = AB^T + BA^T + \widehat{C}$	}

Algorithm: $C = AB^T + BA^T + C$		
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where		
while do		·
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where		
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		, 
endwhile		<i></i>
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	<b>∧</b> ¬(	)
{		}
	where  while do  Determine block size b  where   endwhile   endwhile	where  while do  Determine block size b  where

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

Step	Algorithm: $C = AB^T + BA^T + \hat{C}$
1a	${C = \widehat{C}}$
4	where
2	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$
3	while do
2,3	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge \right.$
5a	Determine block size $b$ where
6	
8	
7	
5b	
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$
	endwhile
2,3	$ \left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land \neg ( )  $
1b	$\{C = AB^T + BA^T + \widehat{C} $ }

Step	Algorithm: $C = AB^T + BA^T + \widehat{C}$
1a	$\{C = \widehat{C}\}$
4	where
2	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$
3	while $m(C_{TL}) < m(C)$ do
2,3	$\left\{ \begin{array}{c c} \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C) \end{array} \right\}$
5a	Determine block size $b$ where
6	
8	
7	
5b	
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$
	endwhile
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge \neg (m(C_{TL}) < m(C)) \right\}$
1b	$\{C = AB^T + BA^T + \widehat{C} $

Step	Algorithm: $C = AB^T + BA^T + \hat{C}$	
1a	$\{C=\widehat{C}$	}
4	$A  o \left(\frac{A_T}{A_B}\right), B  o \left(\frac{B_T}{B_B}\right), C  o \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0  imes 0$	
2	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	
3	while $m(C_{TL}) < m(C)$ do	
2,3	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C)$	
5a	Determine block size $b$ where	
6		
8		
7		
5b		
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	
	endwhile	
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land \neg (m(C_{TL}) < m(C))$	$\begin{bmatrix} \\ \end{bmatrix}$
1b	$\{C = AB^T + BA^T + \widehat{C}$	}

Step	Algorithm: $C = AB^T + BA^T + \hat{C}$
1a	${C = \widehat{C}}$
4	$A \to \left(\frac{A_T}{A_B}\right), B \to \left(\frac{B_T}{B_B}\right), C \to \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0 \times 0$
2	$ \left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $
3	while $m(C_{TL}) < m(C)$ do
2,3	$ \left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land m(C_{TL}) < m(C) $
5a	Determine block size $b$ $ \left(\frac{A_T}{A_B}\right) \to \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \to \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}}\right) \to \left(\frac{C_{00}}{C_{10}}\right) \times \left(\frac{C_{11}}{C_{11}}\right) \times \left(\frac{C_{TL}}{C_{BL}}\right) \times \left(\frac{C_{TL}}{C_{BL}}\right) \times \left(\frac{C_{00}}{C_{10}}\right) \times \left(\frac{C_{11}}{C_{11}}\right) \times \left(\frac{C_{11}}{C_{20}}\right) \times \left(\frac{C_{11}}{C_{21}}\right) \times $
6	
8	
7	
5b	$\left(\begin{array}{c}A_{B}\end{array}\right)$ $\left(\begin{array}{c}B_{B}\end{array}\right)$ $\left(\begin{array}{c}B_{B}\end{array}\right)$ $\left(\begin{array}{c}C_{BL}\end{array}\right)$ $\left(\begin{array}{c}C_{BR}\end{array}\right)$ $\left(\begin{array}{c}C_{20}\end{array}\right)$ $\left(\begin{array}{c}C_{22}\end{array}\right)$
2	$ \left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $
	endwhile
2,3	$\left\{ \left( \frac{C_{TL}}{C_{BL}} \middle  * \atop C_{BR} \right) = \left( \frac{A_T B_T^T + B_T A_T^T + \widehat{C}_{TL}}{\widehat{C}_{BL}} \middle  * \atop \widehat{C}_{BR} \right) \land \neg (m(C_{TL}) < m(C)) \right\}$
1b	$\left\{ C = AB^T + BA^T + \widehat{C} \right\}$

Step	Algorithm: $C = AB^T + BA^T + \hat{C}$
1a	$\{C = \widehat{C}$
4	$A  o \left(\frac{A_T}{A_B}\right), B  o \left(\frac{B_T}{B_B}\right), C  o \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0  imes 0$
2	$ \left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $
3	while $m(C_{TL}) < m(C)$ do
2,3	$\left\{ \begin{array}{c c} \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C) \end{array} \right\}$
5a	Determine block size $b$ $ \left(\frac{A_T}{A_B}\right) \to \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \to \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}} \mid \frac{*}{C_{BR}}\right) \to \left(\frac{C_{00}}{C_{10}} \mid \frac{*}{C_{11}} \mid \frac{*}{C_{20}}\right) $ where $A_1$ has $b$ rows, $B_1$ has $b$ rows, $C_{11}$ is $b \times b$
6	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ \widehat{C}_{10}^T & \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $
8	
7	
5b	$ \left(\frac{A_T}{A_B}\right) \leftarrow \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \leftarrow \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}} \middle  \frac{*}{C_{BR}}\right) \leftarrow \left(\frac{C_{00}}{C_{10}} \middle  \frac{*}{C_{11}} \middle  \frac{*}{C_{20}}\right) $
2	$ \left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $
	endwhile
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land \neg (m(C_{TL}) < m(C))$
1b	$\{C = AB^T + BA^T + \widehat{C} $

Step	Algorithm: $C = AB^T + BA^T + \widehat{C}$	
1a	$\{C=\widehat{C}$	}
4	$A  o \left(\frac{A_T}{A_B}\right), B  o \left(\frac{B_T}{B_B}\right), C  o \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0  imes 0$	
2	$ \left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $	igg
3	while $m(C_{TL}) < m(C)$ do	
2,3	$\left\{ \begin{array}{c c} \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C)$	igg
	Determine block size $b$	
5a	$ \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \to \left(\begin{array}{c} A_0 \\ \hline A_1^T \\ 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^T \\ B_2 \end{array}\right), \left(\begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array}\right) \to \left(\begin{array}{c c} C_{00} & * & * \\ \hline C_{10} & C_{11} & * \\ \hline C_{20} & C_{21} & C_{22} \end{array}\right) $ where $A_1$ has $b$ rows, $B_1$ has $b$ rows, $C_{11}$ is $b \times b$	
	$\left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	
6	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ \widehat{C}_{10}^T & \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $	$\left. ight\}$
8		
7	$ \begin{cases}     \begin{pmatrix}       C_{00} & * & * \\       C_{10}^T & C_{11} & * \\       C_{20} & C_{21} & C_{22}     \end{pmatrix} = \begin{pmatrix}       A_0 B_0^T + B_0 A_0^T + \hat{C}_{00} & * & * \\       A_1 B_0^T + B_1^T A_0^T + \hat{C}_{10}^T & A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + \hat{C}_{11} & * \\       \hat{C}_{20} & \hat{C}_{21} & \hat{C}_{22}     \end{pmatrix} $	$\left. \begin{array}{c} \\ \end{array} \right\}$
5b	$A_B / \overline{A_2} / A_$	
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	igg
	endwhile	
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \land \neg (m(C_{TL}) < m(C))$	$\bigg\}$
1b	$\{C = AB^T + BA^T + \widehat{C}$	}

Step	Algorithm: $C = AB^T + BA^T + \widehat{C}$	
1a	$\{C=\widehat{C}$	}
4	$A  o \left(\frac{A_T}{A_B}\right), B  o \left(\frac{B_T}{B_B}\right), C  o \left(\frac{C_{TL}}{C_{BL}}\right)$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0  imes 0$	
2	$ \left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) $	igg
3	while $m(C_{TL}) < m(C)$ do	
2,3	$\left\{ \begin{array}{c c} \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge m(C_{TL}) < m(C)$	igg
	Determine block size $b$	
5a	$ \left(\begin{array}{c} A_T \\ \hline A_B \end{array}\right) \to \left(\begin{array}{c} A_0 \\ \hline A_1^T \\ A_2 \end{array}\right), \left(\begin{array}{c} B_T \\ \hline B_B \end{array}\right) \to \left(\begin{array}{c c} B_0 \\ \hline B_1^T \\ B_2 \end{array}\right), \left(\begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array}\right) \to \left(\begin{array}{c c} C_{00} & * & * \\ \hline C_{10} & C_{11} & * \\ \hline C_{20} & C_{21} & C_{22} \end{array}\right) $	
	where $A_1$ has $b$ rows, $B_1$ has $b$ rows, $C_{11}$ is $b \times b$	
6	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ \widehat{C}_{10}^T & \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $	$\left. ight\}$
8	$C_{11} = A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + C_{11}$ $C_{10}^T = A_1 B_0^T + B_1^T A_0^T + C_{10}^T$	
7	$ \begin{cases} \begin{pmatrix} C_{00} & * & * \\ C_{10}^T & C_{11} & * \\ C_{20} & C_{21} & C_{22} \end{pmatrix} = \begin{pmatrix} A_0 B_0^T + B_0 A_0^T + \widehat{C}_{00} & * & * \\ A_1 B_0^T + B_1^T A_0^T + \widehat{C}_{10}^T & A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + \widehat{C}_{11} & * \\ \widehat{C}_{20} & \widehat{C}_{21} & \widehat{C}_{22} \end{pmatrix} $	$\left. \begin{array}{c} \\ \end{array} \right\}$
5b	$\left(\begin{array}{c} A_B \end{array}\right) \left(\begin{array}{c} A_B \end{array}\right) \left(\begin{array}{c} B_B \end{array}\right) \left(\begin{array}{c} C_{BL} \end{array}\right) \left(\begin{array}{c} C_{BR} \end{array}\right) \left(\begin{array}{c} C_{20} \end{array}\right) \left(\begin{array}{c} C_{21} \end{array}\right)$	
2	$\left\{ \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right)$	igg
	endwhile	
2,3	$\left\{ \left( \begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array} \right) = \left( \begin{array}{c c} A_T B_T^T + B_T A_T^T + \widehat{C}_{TL} & * \\ \hline \widehat{C}_{BL} & \widehat{C}_{BR} \end{array} \right) \wedge \neg (m(C_{TL}) < m(C))$	igg
1b	$\{C = AB^T + BA^T + \widehat{C}$	}

Algorithm: $C = AB^T + BA^T + \widehat{C}$
$A \to \left(\frac{A_T}{A_B}\right), B \to \left(\frac{B_T}{B_B}\right), C \to \left(\frac{C_{TL}}{C_{BL}}\right) *$ where $A_T$ has 0 rows, $B_T$ has 0 rows, $C_{TL}$ is $0 \times 0$
while $m(C_{TL}) < m(C)$ do
Determine block size $b$
$ \left(\begin{array}{c} A_T \\ \overline{A_B} \end{array}\right) \to \left(\begin{array}{c} A_0 \\ \overline{A_1^T} \\ A_2 \end{array}\right), \left(\begin{array}{c} B_T \\ \overline{B_B} \end{array}\right) \to \left(\begin{array}{c} B_0 \\ \overline{B_1^T} \\ \overline{B_2} \end{array}\right), \left(\begin{array}{c c} C_{TL} & * \\ \hline C_{BL} & C_{BR} \end{array}\right) \to \left(\begin{array}{c c} C_{00} & * & * \\ \hline C_{10} & C_{11} & * \\ \hline C_{20} & C_{21} & C_{22} \end{array}\right) $ where $A_1$ has $b$ rows, $B_1$ has $b$ rows, $C_{11}$ is $b \times b$
$C_{11} = A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + C_{11}$
$C_{10}^T = A_1 B_0^T + B_1^T A_0^T + C_{10}^T$
$ \left(\frac{A_T}{A_B}\right) \leftarrow \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \leftarrow \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}}   * \atop C_{BL}   C_{BR}\right) \leftarrow \left(\frac{C_{00} * * * * \atop C_{10} C_{11} * \atop *} \atop C_{20} C_{21}   C_{22}\right) $
endwhile

Algorithm:  $C = AB^T + BA^T + \widehat{C}$ 

$$A o \left(\frac{A_T}{A_B}\right), B o \left(\frac{B_T}{B_B}\right), C o \left(\frac{C_{TL}}{C_{BL}}\right)$$

where  $A_T$  has 0 rows,  $B_T$  has 0 rows,  $C_{TL}$  is  $0 \times 0$ 

while  $m(C_{TL}) < m(C)$  do

Determine block size b

where  $A_1$  has b rows,  $B_1$  has b rows,  $C_{11}$  is  $b \times b$ 

$$C_{11} = A_1^T (B_1^T)^T + B_1^T (A_1^T)^T + C_{11}$$

$$C_{10}^T = A_1 B_0^T + B_1^T A_0^T + C_{10}^T$$

$$\left(\frac{A_T}{A_B}\right) \leftarrow \left(\frac{A_0}{A_1^T}\right), \left(\frac{B_T}{B_B}\right) \leftarrow \left(\frac{B_0}{B_1^T}\right), \left(\frac{C_{TL}}{C_{BL}} | * \atop C_{BL} | C_{BR}\right) \leftarrow \left(\frac{C_{00} * * * \atop C_{10} C_{11} * \atop * \atop C_{20} C_{21} | C_{22}\right)$$

endwhile