

Step	Algorithm: $[C] := \text{SYR2K_LN_BLK_VAR9}(A, B, C)$
1a	$\{C = \widehat{C}\}$
4	$A \rightarrow \left(A_L \middle A_R \right), B \rightarrow \left(B_L \middle B_R \right)$ where A_L has 0 columns, B_L has 0 columns
2	$\{C = A_L B_L^T + B_L A_L^T + \widehat{C}\}$
3	while $n(A_L) < n(A)$ do
2,3	$\left\{ \begin{array}{l} C = A_L B_L^T + B_L A_L^T + \widehat{C} \wedge n(A_L) < n(A) \end{array} \right\}$
5a	Determine block size b $\left(A_L \middle A_R \right) \rightarrow \left(A_0 \middle A_1 \ A_2 \right), \left(B_L \middle B_R \right) \rightarrow \left(B_0 \middle B_1 \ B_2 \right)$ where A_1 has b column, B_1 has b column
6	$\{C = A_0 B_0^T + B_0 A_0^T + \widehat{C}\}$
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5b	$\left(A_L \middle A_R \right) \leftarrow \left(A_0 \ A_1 \middle A_2 \right), \left(B_L \middle B_R \right) \leftarrow \left(B_0 \ B_1 \middle B_2 \right)$
2	$\{C = A_L B_L^T + B_L A_L^T + \widehat{C}\}$
	endwhile
2,3	$\{C = A_L B_L^T + B_L A_L^T + \widehat{C} \wedge \neg(n(A_L) < n(A))\}$
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