Unfold le 2 4, Memo upto 3 4 v_{34} , Unfold multiply 2 2 v_{31} , Unfold squares v_{34} v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$] Unfold le 1 3, Memo upto 3 4 v_{34} , Unfold multiply 2 2 v_{31} , Unfold squares v_{34} v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$] Unfold le 0 2, Memo upto 3 4 v_{34} , Unfold multiply 2 2 v_{31} , Unfold squares v_{34} v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$, $v_{37} \rightarrow 0$, $v_{38} \rightarrow 2$] Unfold le 3 4, Memo upto 4 4 v_{41} , Unfold multiply 2 2 v_{31} , Unfold squares (3 : v_{41}) v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{34} \rightarrow 3$: v_{41} , $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$, $v_{37} \rightarrow 0$, $v_{38} \rightarrow 2$] Unfold le 2 3, Memo upto 4 4 v_{41} , Unfold multiply 2 2 v_{31} , Unfold squares (3 : v_{41}) v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{34} \rightarrow 3$: v_{41} , $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$, $v_{37} \rightarrow 0$, $v_{38} \rightarrow 2$, $v_{42} \rightarrow 2$, $v_{43} \rightarrow 3$] Unfold le 1 2, Memo upto 4 4 v_{41} , Unfold multiply 2 2 v_{31} , Unfold squares (3 : v_{41}) v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{34} \rightarrow 3$: v_{41} , $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$, $v_{37} \rightarrow 0$, $v_{38} \rightarrow 2$, $v_{42} \rightarrow 2$, $v_{43} \rightarrow 3$, $v_{44} \rightarrow 1$, $v_{45} \rightarrow 2$] Unfold le 0 1, Memo upto 4 4 v_{41} , Unfold multiply 2 2 v_{31} , Unfold squares (3 : v_{41}) v_{32} , Unfold add v_{31} 1 v_{33} , Unfold sum1 v_{32} v_{33} v_{0} [$v_{20} \rightarrow 2$, $v_{21} \rightarrow v_{34}$, $v_{34} \rightarrow 3$: v_{41} , $v_{35} \rightarrow 1$, $v_{36} \rightarrow 3$, $v_{37} \rightarrow 0$, $v_{38} \rightarrow 2$, $v_{42} \rightarrow 2$, $v_{43} \rightarrow 3$, $v_{44} \rightarrow 1$, $v_{45} \rightarrow 2$, $v_{46} \rightarrow 0$, $v_{47} \rightarrow 1$] $\begin{array}{c} C \\ \text{Memo upto 4 4 v_{41}, Unfold add 1 v_{51} v_{53}, Unfold multiply 2 1 v_{51}, Unfold squares (3:v_{41}) v_{32}, Unfold add ((1+v_{53})) 1 v_{33}, Unfold sum1 v_{32} v_{33} v_{0} \\ [v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{34} \rightarrow 3: v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{52} \rightarrow 1 \end{array}]$ $\begin{bmatrix} v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{34} \rightarrow 3: v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{51} \rightarrow v_{55}, v_{52} \rightarrow 1, v_{53} \rightarrow (1+v_{53}), v_{54} \rightarrow 0, v_{55} \rightarrow (1+v_{61}), v_{58} \rightarrow 0, v_{59} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1+v_{63}), v_{62} \rightarrow 0 \end{bmatrix}$ $\begin{bmatrix} v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{34} \rightarrow 3: v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{51} \rightarrow v_{55}, v_{52} \rightarrow 1, v_{53} \rightarrow (1+v_{51}), v_{58} \rightarrow 0, v_{59} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1+v_{63}), v_{62} \rightarrow 0, v_{63} \rightarrow 0 \end{bmatrix}$ $\text{Memo upto 4 4 v_{69}, Unfold square 3 v_{70}, Unfold square v_{69} v_{71}, Unfold add 41 v_{33}, Unfold sum1 $(v_{70}:v_{71})$ v_{33} v_{0} \\ [v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{32} \rightarrow v_{70}:v_{71}, v_{34} \rightarrow 3: v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{41} \rightarrow v_{69}, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{51} \rightarrow v_{55}, v_{52} \rightarrow 1, v_{53} \rightarrow (1+v_{53}), v_{54} \rightarrow 0, v_{55} \rightarrow (1+v_{61}), v_{58} \rightarrow 0, v_{59} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1+v_{63}), v_{62} \rightarrow 0, v_{63} \rightarrow 0, v_{68} \rightarrow 3]$ $\text{Memo upto 4 4 v_{69}, Unfold add 3 v_{73} v_{70}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold sum1 (v_{70} : v_{71}) v_{33} v_{0} \\ \hline [v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{32} \rightarrow v_{70} : v_{71}, v_{34} \rightarrow 3 : v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{41} \rightarrow v_{69}, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{51} \rightarrow v_{55}, v_{52} \rightarrow 1, v_{53} \rightarrow (1+v_{61}), v_{58} \rightarrow 0, v_{59} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1+v_{63}), v_{62} \rightarrow 0, v_{68} \rightarrow 3, v_{72} \rightarrow 2]$ $\text{Memo upto 4 4 v_{69}, Unfold add 2 v_{73} v_{75}, Unfold add 2 v_{73} v_{75}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Variable 3 2 v_{73}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Variable 3 2 v_{73}, Varia$ $\text{Memo upto 4 4 v_{69}, Unfold add 1 v_{73} v_{77}, Unfold multiply 3 2 v_{73}, Unfold add 4 1 v_{33}, Unfold sum 1 ((2 + v_{77}) : v_{71}) v_{33} v_{0} \\ [v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1 + v_{53}), v_{32} \rightarrow v_{70} : v_{71}, v_{34} \rightarrow 3 : v_{41}, v_{35} \rightarrow 1, v_{36} \rightarrow 3, v_{37} \rightarrow 0, v_{38} \rightarrow 2, v_{41} \rightarrow v_{69}, v_{42} \rightarrow 2, v_{43} \rightarrow 3, v_{44} \rightarrow 1, v_{45} \rightarrow 2, v_{46} \rightarrow 0, v_{47} \rightarrow 1, v_{50} \rightarrow 1, v_{51} \rightarrow v_{55}, v_{52} \rightarrow 1, v_{53} \rightarrow (1 + v_{61}), v_{58} \rightarrow 0, v_{59} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1 + v_{63}), v_{62} \rightarrow 0, v_{63} \rightarrow 0, v_{68} \rightarrow 3, v_{70} \rightarrow (1 + v_{77}), v_{76} \rightarrow 1]$ $\text{Memo upto 4 4 v_{69}, Unfold add 2 v_{83} v_{85}, Unfold add 2 v_{83} v_{85}, Unfold add 4 1 v_{33}, Unf$ $\begin{bmatrix} v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1 + v_{53}), v_{32} \rightarrow v_{70} : v_{71}, v_{34} \rightarrow 3 : v_{41}, v_{35} \rightarrow 1, v_{69} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1 + v_{61}), v_{58} \rightarrow 0, v_{79} \rightarrow v_{63}, v_{60} \rightarrow 1, v_{61} \rightarrow (1 + v_{61}), v_{79} \rightarrow v_{79}, v_{74} \rightarrow 2, v_{75} \rightarrow (1 + v_{77}), v_{76} \rightarrow 1, v_{77} \rightarrow (1 + v_{79}), v_{78} \rightarrow 0, v_{79} \rightarrow (1 + v_{79}), v_{79} \rightarrow 0, v_{79} \rightarrow (1 + v_{79}), v_{79} \rightarrow 0, v_{79}$ $\begin{bmatrix} \text{Memo upto 4 4 v_{69}, Unfold multiply 3 1 v_{89}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold squares v_{69} v_{71}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold squares v_{69} v_{71}, Unfold add 4 1 v_{33}, Unfold squares v_{69} v_{71}, Unfold squar$ $\begin{bmatrix} v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1+v_{53}), v_{32} \rightarrow v_{70} : v_{71}, v_{34} \rightarrow 3 : v_{41}, v_{35} \rightarrow 1, v_{69} \rightarrow 0, v_{69} \rightarrow 0,$ $\begin{bmatrix} v_{20} \rightarrow 2, v_{21} \rightarrow v_{34}, v_{31} \rightarrow (1 + v_{53}), v_{32} \rightarrow v_{70} : v_{71}, v_{34} \rightarrow 3 : v_{41}, v_{35} \rightarrow 1, v_{53} \rightarrow (1 + v_{75}), v_{72} \rightarrow 2, v_{73} \rightarrow v_{79} \rightarrow 0, v_{79} \rightarrow (1 + v_{79}), v_{78} \rightarrow 0, v_{79} \rightarrow (1 + v_{79}), v_{79} \rightarrow 0, v_{79} \rightarrow$