

Algorithm:  $[\alpha] := \text{DOTS\_UNB\_VAR1}(x, y, \alpha)$

$$x \rightarrow \begin{pmatrix} x_T \\ \frac{x_T}{x_B} \end{pmatrix}, y \rightarrow \begin{pmatrix} y_T \\ \frac{y_T}{y_B} \end{pmatrix}$$

where  $x_T$  has 0 rows,  $y_T$  has 0 rows

while  $m(x_T) < m(x)$  do

$$\begin{pmatrix} x_T \\ \frac{x_T}{x_B} \end{pmatrix} \rightarrow \begin{pmatrix} x_0 \\ \frac{\chi_1}{x_2} \end{pmatrix}, \begin{pmatrix} y_T \\ \frac{y_T}{y_B} \end{pmatrix} \rightarrow \begin{pmatrix} y_0 \\ \frac{\psi_1}{y_2} \end{pmatrix}$$

where  $\chi_1$  has 1 row,  $\psi_1$  has 1 row

$$\alpha := \chi_1 \psi_1 + \alpha$$

$$\begin{pmatrix} x_T \\ \frac{x_T}{x_B} \end{pmatrix} \leftarrow \begin{pmatrix} x_0 \\ \frac{\chi_1}{x_2} \end{pmatrix}, \begin{pmatrix} y_T \\ \frac{y_T}{y_B} \end{pmatrix} \leftarrow \begin{pmatrix} y_0 \\ \frac{\psi_1}{y_2} \end{pmatrix}$$

endwhile