فصل ۱

محاسبه پایه گروبنر

$\text{input} G_{<_1}(I), <_2$

$\text{output} G_{<_2}(I), B_{<_2}(\frac{K[x_1,\cdots,x_n]}{I})$

$B_{<_2} = \varnothing, G_{<_2} = \varnothing, t := 0$

while x $^\alpha$ is not a power of largest variable in second order **do**

$\quad w := \text{Next monomial}[x^\alpha];$

$\quad v := \text{Can}(x^\alpha, \text{I}, <);$

$\quad \Lambda := \text{LD}[v, \{v_1, ..., v_r\}];$

$\quad$ **if** $\Lambda \neq \varnothing$ **then** G=G$\cup\{x^\alpha - \sum \lambda_j \; x^{\alpha_j}\};$

$\qquad\quad$ **else** r:=r+1, $B_{<_2} := B_{<_2} \cup \{x^\alpha - \sum \lambda_j \; x^{\alpha_j}\};$

$\qquad\qquad v_r = v;$

$\qquad\qquad w_r = w;$