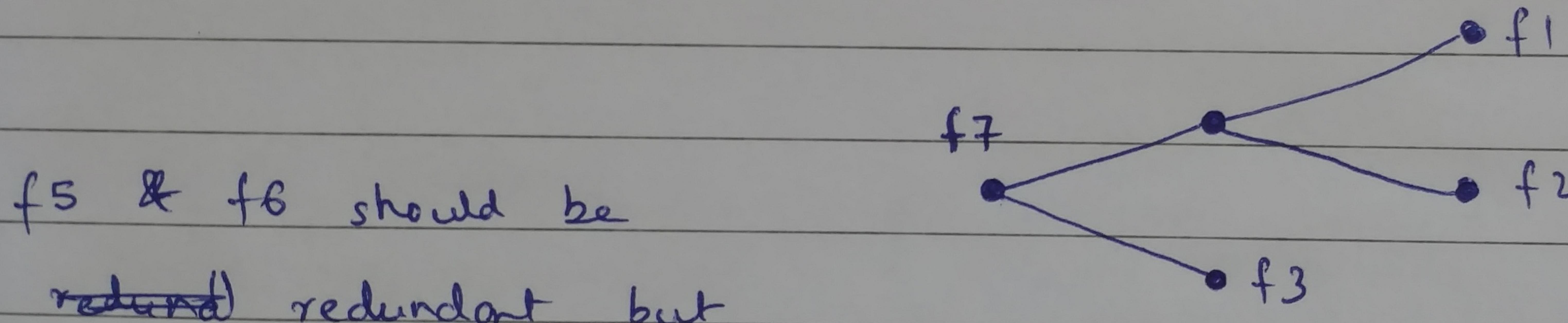


Refutation DAGSivua's example

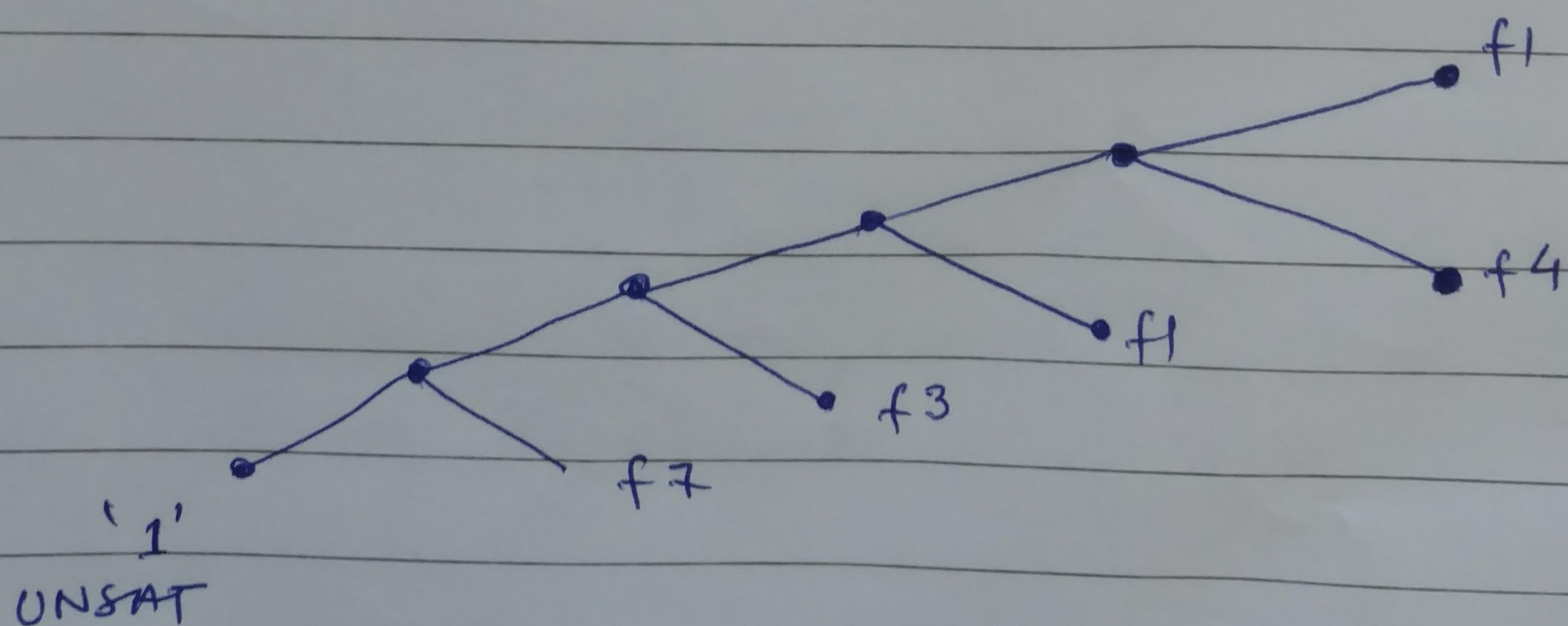
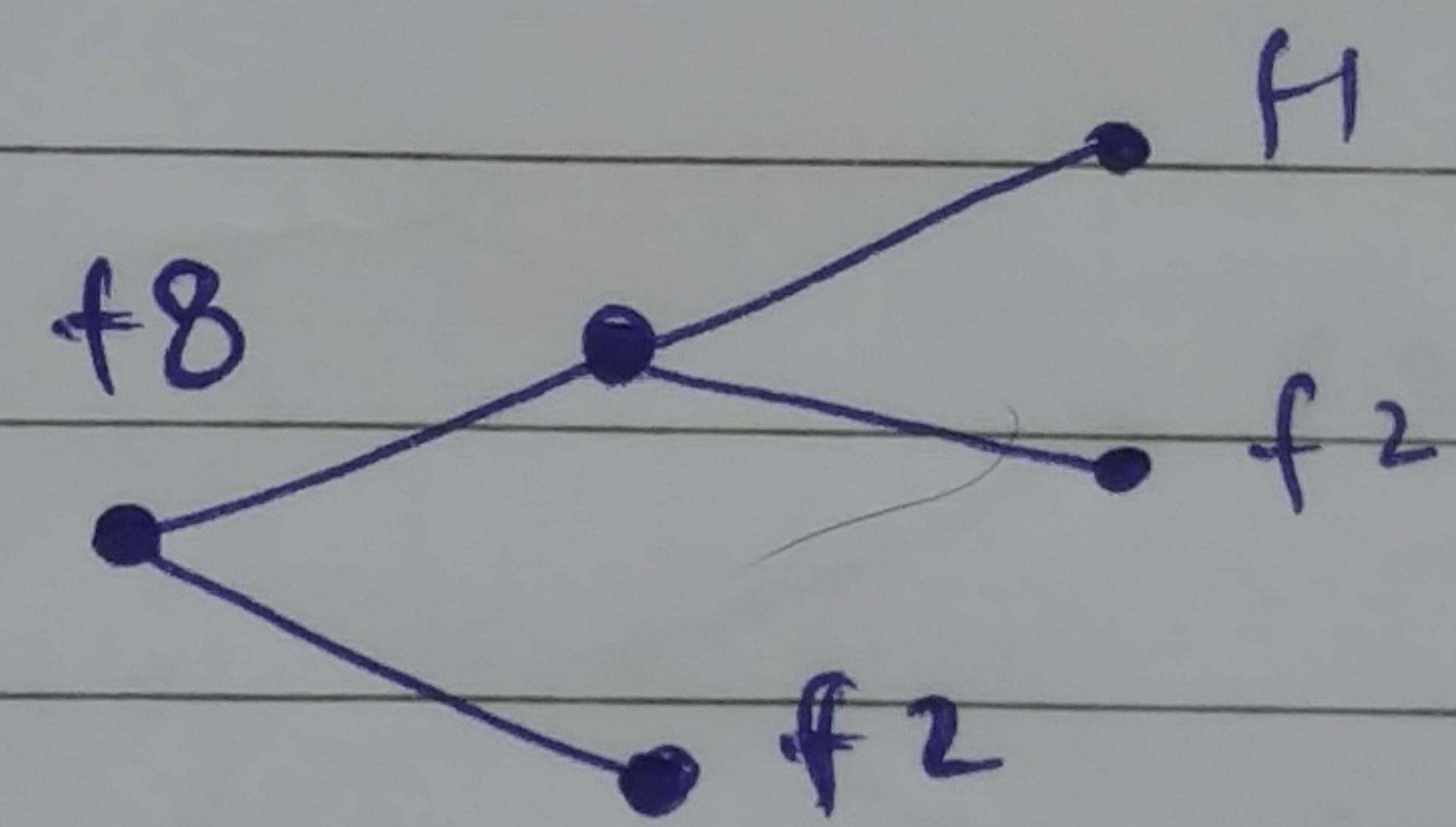
Initially 6 polynomials in $[a_1, a_2, a_3, a_4]$ with lex order

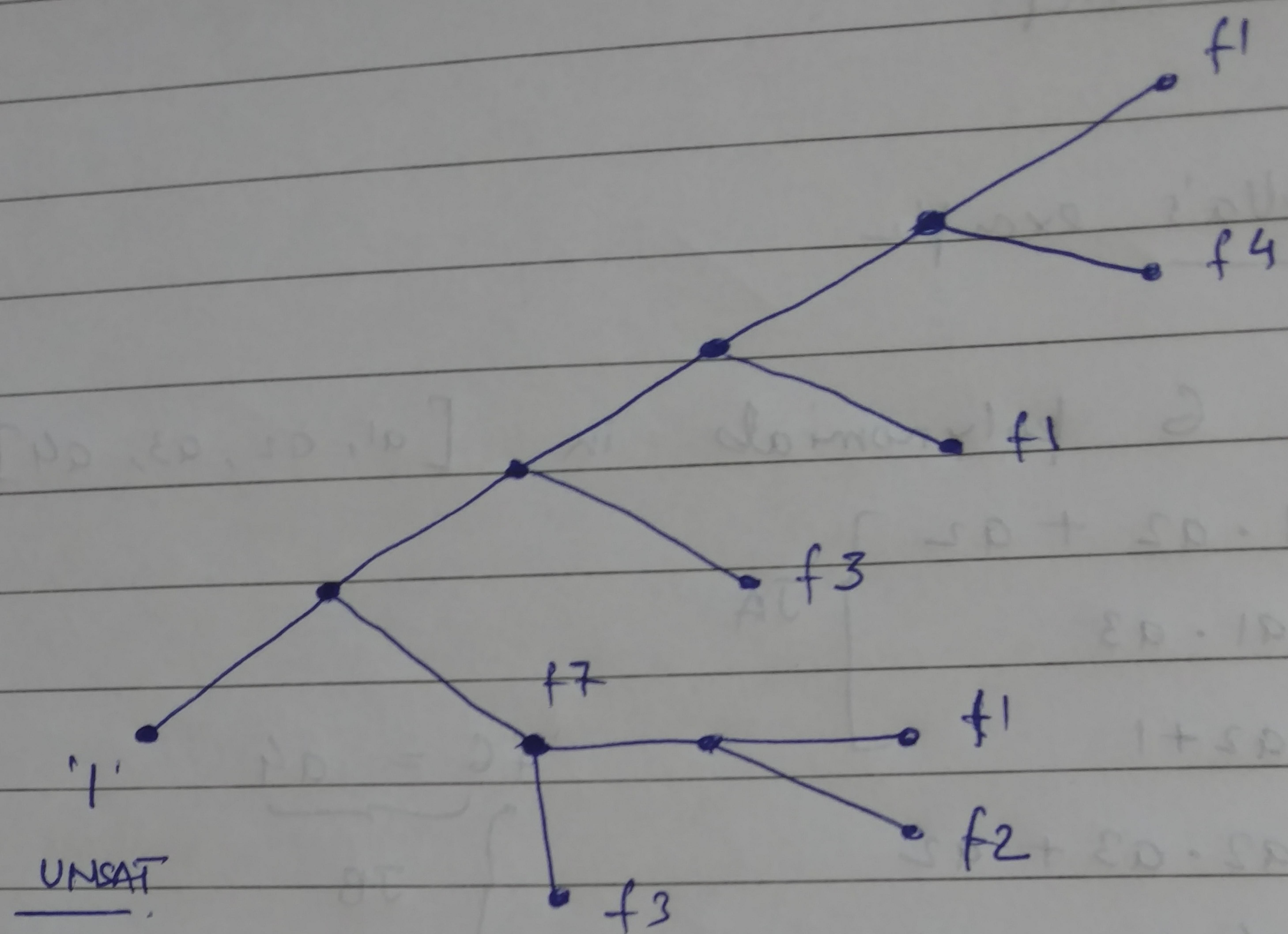
$$\begin{array}{l} f_1 = a_1 \cdot a_2 + a_2 \\ f_2 = a_1 \cdot a_3 \\ f_3 = a_2 + 1 \\ f_4 = a_2 \cdot a_3 + a_2 \\ f_5 = a_4 \cdot a_2 + a_4 + a_2 + 1 \\ f_6 = a_4 \\ f_7 = a_3 \\ f_8 = a_1 + 1 \end{array} \quad \left. \begin{array}{l} \text{JA} \\ \text{JB} \end{array} \right\} \quad \begin{array}{c} a_1, a_4, a_2, a_3 \\ \hline A \quad B \quad C \end{array}$$


f_5 & f_6 should be

~~redundant~~ redundant but

it is not reported by X.S.'s
tool.





complete Refutative DAE

FMCAD'17 Example

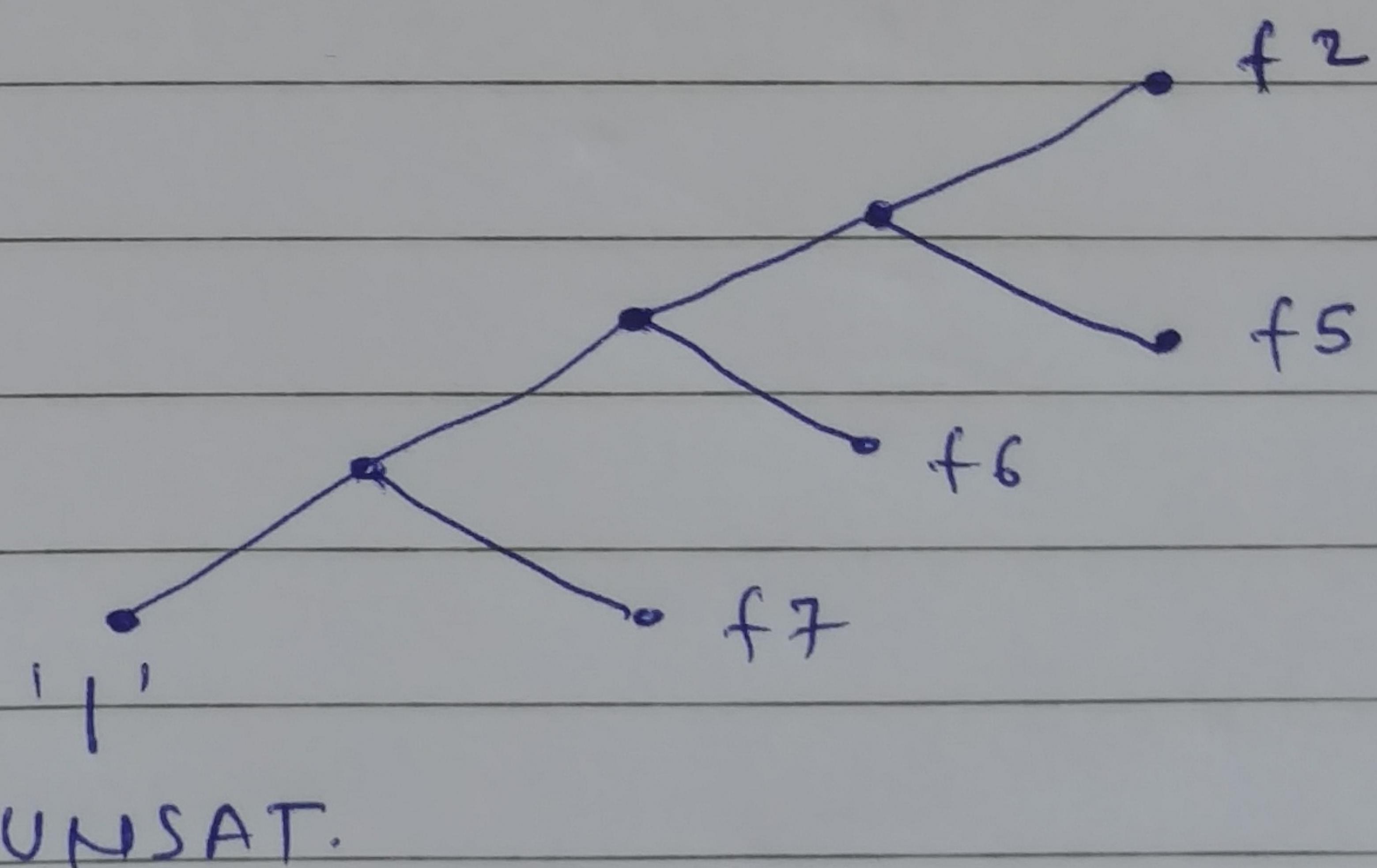
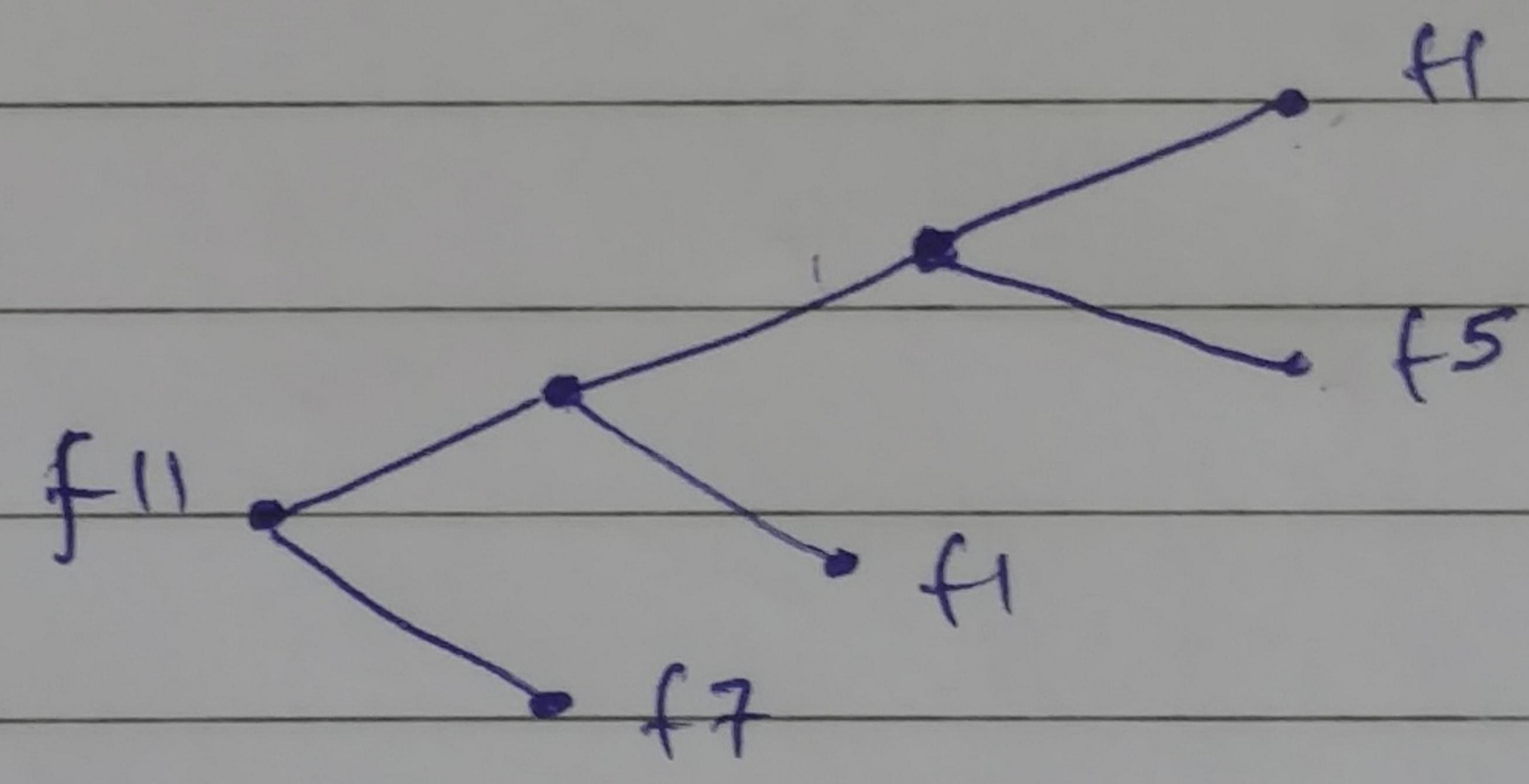
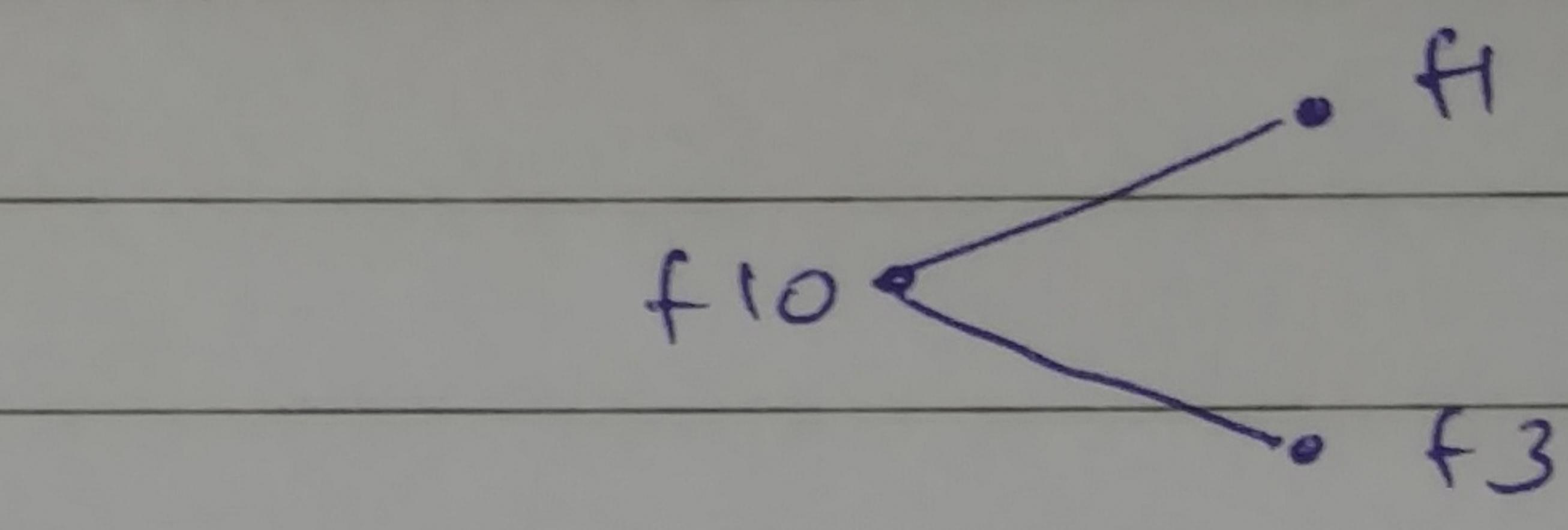
Initially 9 polynomials $\{a, b, c, d, e\}$ with lex order $\overbrace{a, e, b, c, d}^{\text{A} \sim \text{B} \sim \text{C}}$

$$\left. \begin{array}{l} f_1 = ab \\ f_2 = bd \\ f_3 = bc + c \\ f_4 = cd \\ f_5 = bd + b + d + 1 \end{array} \right\} \text{JA}$$

$$f_{10} = a \cdot c$$

$$f_{11} = a$$

$$\left. \begin{array}{l} f_6 = b \\ f_7 = d \\ f_8 = ec + e + c + 1 \\ f_9 = ee \end{array} \right\} \text{JB}$$



There a lot of redundant polynomials but the tool only reports f_4 as redundant