F. Graphing \( f(x,y)=0 \)

This is a clever program and I wish I could give proper credit, but I cannot remember the source. It's just been on my calculator for a long time.

The program will plot the graph of equations of the form \( f(x,y)=0 \). Unfortunately, it is so slow (on the order of 10 minutes for \( x^2-y^2-1=0 \)) that it is practically useless for classroom applications. But it usually does a nice job and it is by far the best of these programs I have seen. It is based on the intermediate value theorem.

Before running, set range variables and enter \( f(x,y) \) in y1 (use lower case \( x,y \)).

```
PROGRAM: GR2VAR
:fNoFF
:DispG
:For(x,xMin,xMax,\( \Delta x \))
:0-T
:For(y,yMin,yMax,\( \Delta y \))
:If T*y1<0:PtOn(x,y)
:yl=T
:End
:End
```