INVT (Inverse $t$) Program for TI-83 or TI-83 PLUS
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Purpose: Just as invNorm accepts a quantile value (between 0 and 1, inclusive) and returns a $z$ score, the INVT program accepts a value between 0 and 1, plus user-specified degrees of freedom (df), and returns a $t$ score. INVT thus fills a gap that TI left when designing the firmware of the TI-83.

Simple Program Listing:

```
:ClrHome
:Disp "INVERSE T"
:Disp "BY EMH, 3-8-1999"
:Disp "CUM. PROB.";Prompt P
:Disp "DF (INTEGER ≥ 1)";Prompt D
:D+1→N
:If P<1×9 or P>1−1×9 or D<1 or D≠round(D,0)
:Then
:Disp "DOMAIN ERROR"
:Stop
:End
:TInterval 0,√(N),N,abs(2P-1)
:If P≥.5
:Then
:upper→T
:Else
:lower→T
:End
:Output(6,11,"T=")
:T
```