

### **Completing the Square (translated by WKH)**

Mode Selection: The program needs to be executed in COMP mode (real numbers), so after selecting the new program location, press 1 to choose COMP mode.

#### **Program Input Method: (41 bytes)**

?→A: ?→B: ?→C: - B<sup>-1</sup> (2A) →X: C - A Ans<sup>2</sup> →Y:  
A ▲ - X ▲ Y ▲ X ▲ Y ▲

**Testing Example Equations:**  $y = -\frac{1}{3}x^2 + 12x - 121$

Press Prog, then press  $-\frac{1}{3}$  EXE -12 EXE -121.

Press EXE (displays  $-\frac{1}{3}$ ) EXE (displays -18) EXE (displays -13).

Therefore,  $y = -\frac{1}{3}(x - 18)^2 - 13$

Press EXE (displays 18) EXE (displays -13).

Therefore, the vertex point is  $x = 18$  and  $y = -13$ .