

B-10 Graphing the Inverse of a Function

Parametric equations allow you to graph any function and its inverse. For example, the function $y = 2 - x^2$ with domain $x \geq 0$ can be graphed using parametric mode. For a parametric equation, both x and y must be expressed in terms of a parameter, t . Replace x with t . Then $x = t$ and $y = 2 - t^2$. The inverse of this function can now be graphed.

1. Clear the calculator and press **MODE**.

Change the setting to the parametric mode by scrolling down to the fourth line and to the right to **Par**, as shown on the screen. Press **ENTER**.

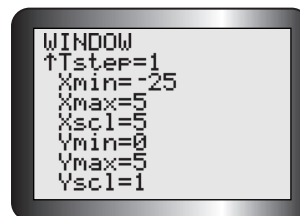
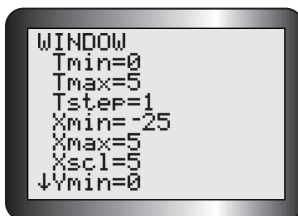


2. Enter the inverse function by swapping the parametric equations $x = t$, $y = 2 - t^2$ to $x = 2 - t^2$, $y = t$.

Press **Y=**. At $X1T=$, enter **2** **-** **X,T,θ,n** **x²**
ENTER. At $Y1T=$, enter **X,T,θ,n**.

3. Press **WINDOW**.

The original domain, $x \geq 0$, is also the domain of t . Use window settings such as the ones shown to display the graph.



4. Press **GRAPH** to display the inverse function.

