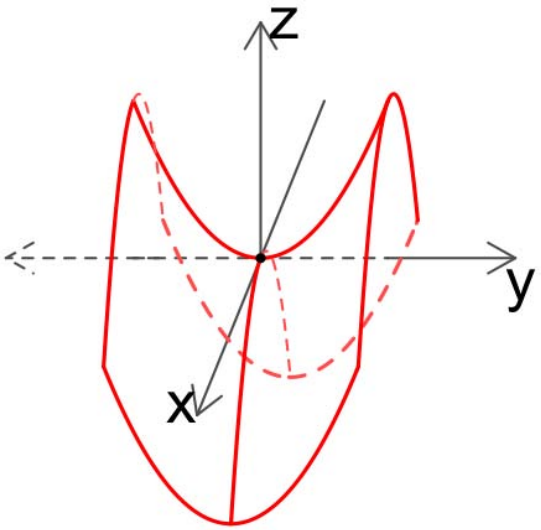
Graphing a function

1. Draw the graph of $z = y^2 - x^2$.

Answer: Here is the graph.
1. First we drew the trace in the yz-plane, which is an upward pointing parabola.
2. Then we drew the xz-traces with $y = 0$, $y = 1$ and $y = -1$.
3. Finally we drew the yz-traces $x = 1$ and $x = -1$.

Lines that are hidden from view are drawn with dashes.

This surface is called a *saddle* and also, a *hyperbolic paraboloid*.



18.02SC Multivariable Calculus
Fall 2010