IALP 2011 – Octave TP3

P. Stallinga

MIEET 1º ano

Exercise 1:
Plot the function of $y = f(x) = x^2 - 1$ between $x = -2$ and $x = 3$.

Exercise 2:
a) Of the plot above, plot only the first ten points
b) Of the plot above, plot that part that has $y > 2$.
Suggestion: Use function `find` that returns all the indexes of an array that meet a certain condition, for example: `indexes = find(x<0)` gives an array of all indexes `index` for which x(index)<0.

Exercise 3:
Plot the function of $z = f(x, y) = x^2y^2 - xy + x + 2y - 2$ between $x = -2 .. 2$ and $y = -2 .. 2$

Exercise 4:
Of the plot above, plot that part that has $z > 2$ and $x < 0$.

Exercise 5:
Make a contour plot of the same function

Exercise 6:
Make a plot of the function $(x^2-1)\sin(x)$ between -4π and 4π (500 points) and indicate (by Octave, not on paper) where is the maximum of this function in this interval.