Homework 1 – due M 02/11/08
Getting used to Matlab Neural Network Toolbox neural networks
Submit important commands, plots, etc., for grading
Use information found in the Matlab help for Neural Network Toolbox, Reference,

1. [50 points]
a) For the Matlab neural network toolbox function tribas, run the reference sample:
n = -5:0.1:5; a = tribas(n); plot(n,a).
Then for the file tribas.m, designate for each of its non-comment lines what action it
performs. Save a new version, tribas2.m, which has twice the width and 1/2 the height.
b) Run newff using the first transfer function as tribas using the input to be n of part a)
above. Simulate and plot the result.

2. [50 points]
a) For P=[-5:0.1:5], T=1-P./(1+P.*P)
Use newff to make several feedforward networks to compare their performance.
        Use purelin at the (single neuron) output layer and tansig for all other layer
        activation functions. Compare and discuss the results of each of the cases.
    a1) as listed in the newff information (2 layers, 5 input neurons and1 output)
    a2) two layers with 6 neurons in the first layer and 1 neuron in the second layer.
    a3) two layers with 1 neuron in the first layer and 1 neuron in the second layer.
    a4) five layers with 2, 3, 4, 5, 1 neurons in the respective layers.
    a5) five layers with 5, 5, 5, 5, 1 neurons in the respective layers.
b) Repeat a1) and a2) with tansig replaced by logsig.