## Project1-1

### sigmoid function case

Error in the 130-th learning cycle=0.000000 Error in the 130-th learning cycle=0.002492 Error in the 130-th learning cycle=0.005029 Error in the 130-th learning cycle=0.009920

the weight of perceptron learning rule 6.419696 6.375360 9.690702

### discrete function case

Error in the 6-th learning cycle=0.000000 Error in the 6-th learning cycle=0.000000 Error in the 6-th learning cycle=0.000000 Error in the 6-th learning cycle=0.000000

the weight of perceptron learning rule 2.486051 1.261674 2.940506

# Project1-2

#### delta learning rule perceptron learning rule

error 0.004921 0.000000 iteration steps 16 6

the weight of delta learning rule 1.428389 1.038333 1.328800 -0.906048 -1.923293 -0.101456 -0.826124 0.686861 0.342136

the weight of perceptron learning rule 7.104440 5.191631 6.865663 -3.432007 -11.708179 0.733677 -9.512499 -2.347115 0.770273