使用 **Matlab** 或其它神经网络工具包，建立单层感知器，解决薛毅书（纸介质，电子版第 **459** 页）第 **389** 页 例 **8.3** 建立分类器的问题

解答：

训练模型

```
>> P = [24.8 24.1 26.6 23.5 25.5 27.4 22.1 21.6 22.0 22.8 22.7 21.5 22.1 21.4; -2.0 -2.4 -3.0 -1.9 -2.1 -3.1 -0.7 -1.4 -0.8 -1.6 -1.5 -1.0 -1.2 -1.3]
```

```
P =

   24.8000   24.1000   26.6000   23.5000   25.5000   27.4000   22.1000   21.6000   22.0000   22.8000   22.7000   21.5000   22.1000   21.4000
   -2.0000   -2.4000   -3.0000   -1.9000   -2.1000   -3.1000   -0.7000   -1.4000   -0.8000   -1.6000   -1.5000   -1.0000   -1.2000   -1.3000
```

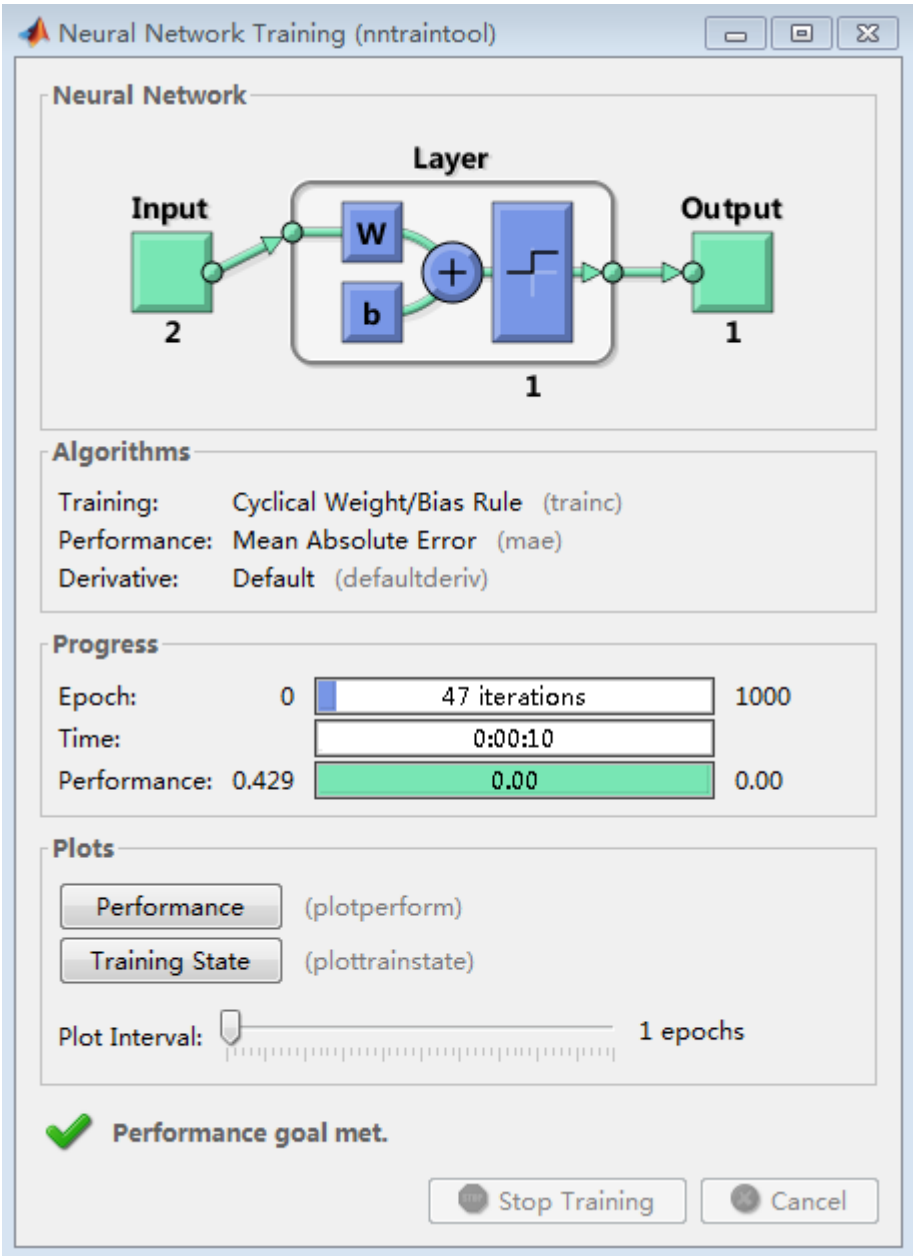
```
>> T = [0 0 0 0 0 0 1 1 1 1 1 1 1 1]
```

```
T =

     0     0     0     0     0     0     1     1     1     1     1     1     1     1
```

```
>> net = newp([21 28;-4 1],1)
```

```
net =

    Neural Network

            name: 'Custom Neural Network'
        userdata: (your custom info)

    dimensions:

         numInputs: 1
         numLayers: 1
        numOutputs: 1
    numInputDelays: 0
    numLayerDelays: 0
 numFeedbackDelays: 0
 numWeightElements: 3
        sampleTime: 1
```

```
>> net = train(net, P, T);
```

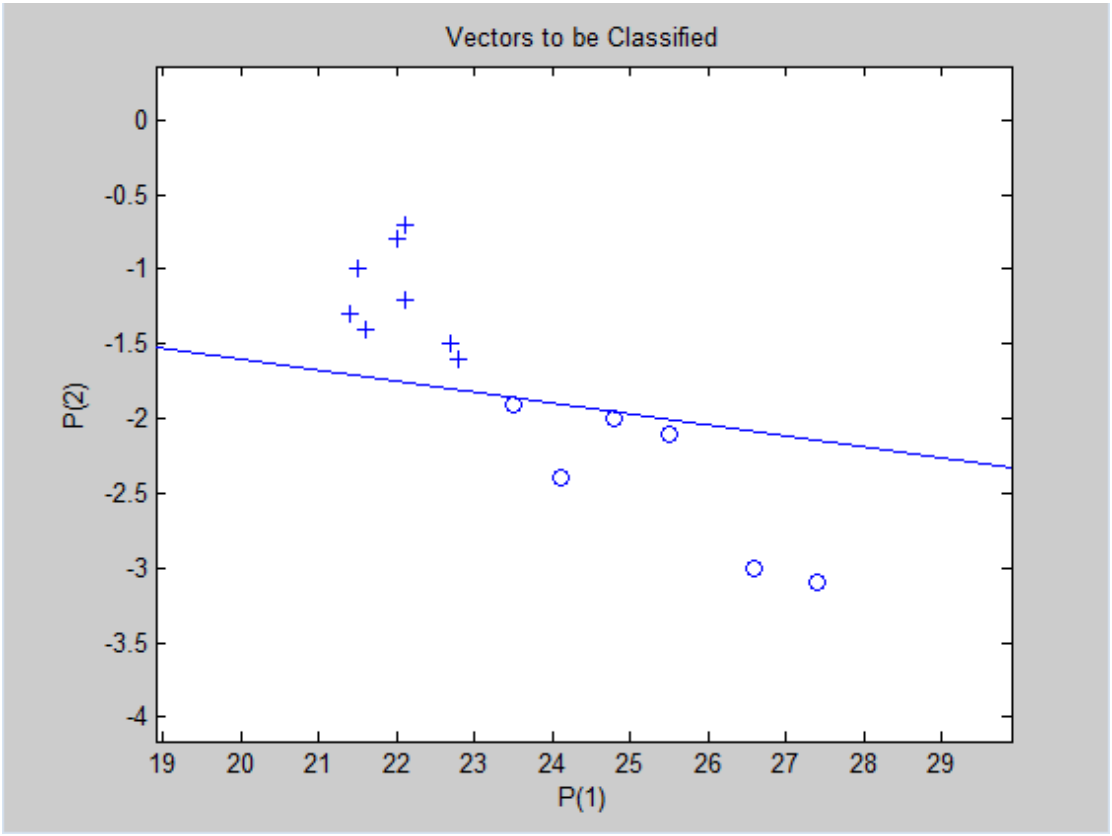


带入训练值，看一下训练的结果 都分类正确

```
>> Y = sim(net,P)

Y =

     0     0     0     0     0     0     1     1     1     1     1     1     1     1
```

画出分类线

```
>> figure;
>> plotpv(P,Y)
>> plotpc(net.iw{1},net.b{1})
```


Vectors to be Classified
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4
P(2)
19
20
21
22
23
24
25
26
27
28
29
P(1)