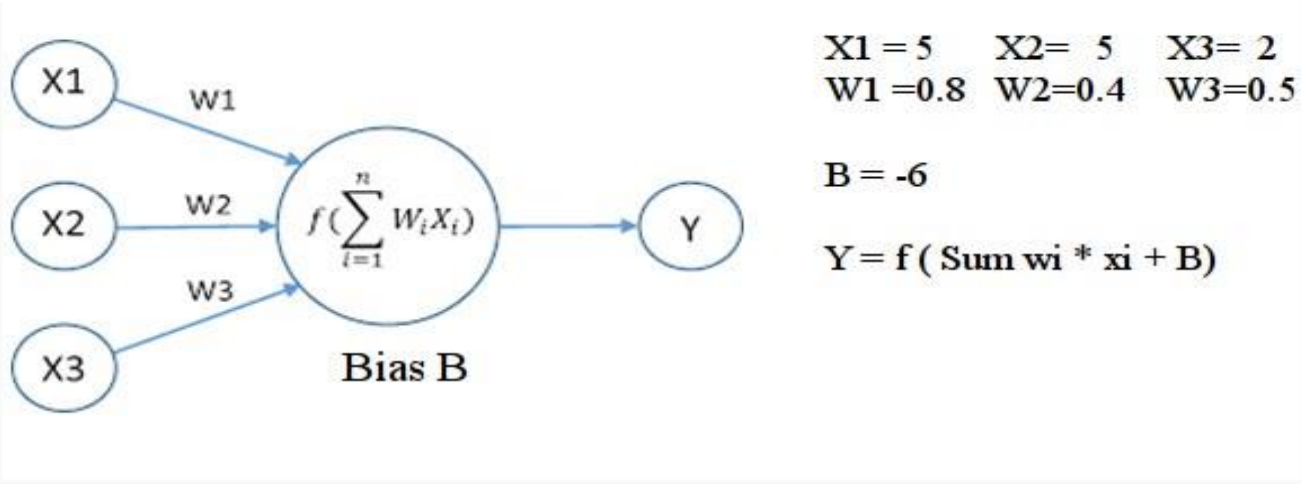
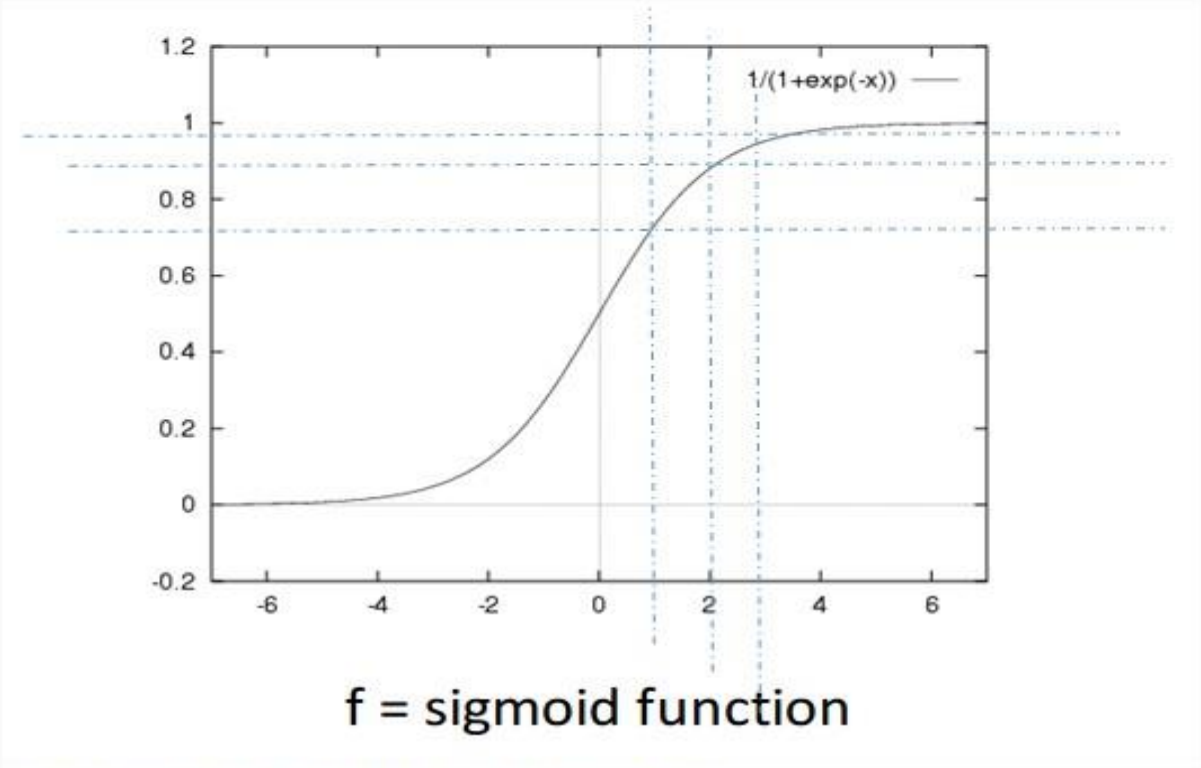
Artificial Neuron:





What is the output value Y for the above artificial neuron?

- 0.9
- 0.97
- 0.72

Yes, the answer is correct.
Score: 2

Accepted Answers:
0.72

Solution:

Given:

W1=0.8 W2=.4 W3=.5

x1=5 X2=5 x3=2

B=-6

Y=?

Y=f(Sum(Wi*Xi)+B)

First we Solve,

let x=Summation(Wi*Xi)+B=(W1*X1+W2*X2+W3*X3)+B

=0.8*5+.4*5+0.5*2-6

=4+2+1-6

=1

Y=f(Sum(Wi*Xi)+B)=f(1)

f(x) is a Sigmoid Function.

f(x)=1/1+e^-x

Here e=2.7182818281…..

x=1

f(1)= 1/ (1+e^-1)

(e=2.7182818281….,1/e=1/2.7182818281….=0.3679)

y=f(1)=1/1+.3679=1/1.3679

y =0.73(Approx)