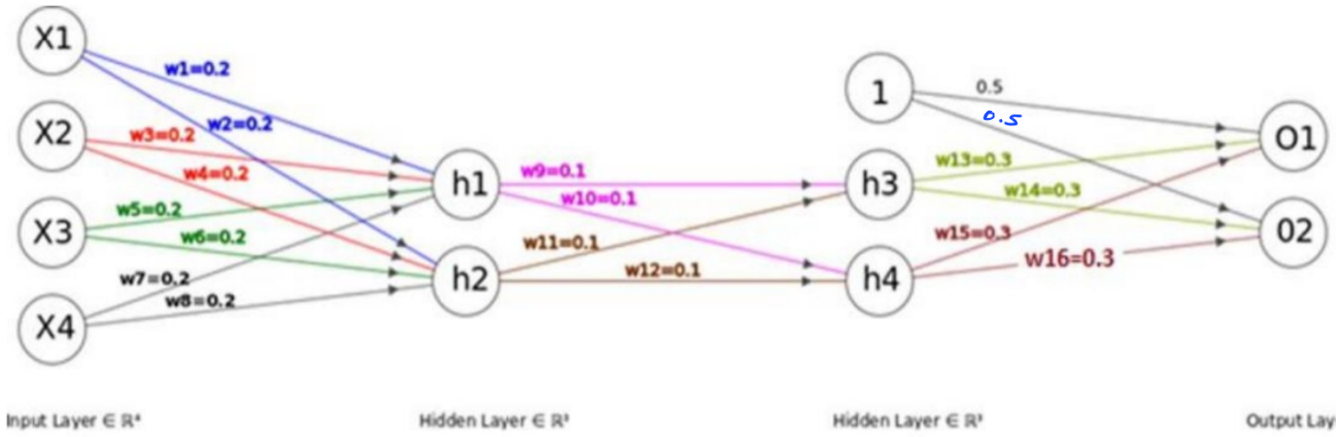

Calculate the output of the above neural network. Consider the following parameters:

x1 = (<SSID>/8964879)*23

x2 = (<SSID>/8964879)*32

x3 = (<SSID>/8964879)*56

x4 = (<SSID>/8964879)*48

Relu – Hidden layer

Sigmoid = Output layer

SSID = 2457431

$x_1 = (2457431 / 8964879) \times 23$

$= 0.27 \times 23$

$= 6.30$

$x_2 = (2457431 / 8964879) \times 32$

$= 8.77$

$x_3 = (2457431 / 8964879) \times 56$

$= 15.35$

$x_4 = (2457431 / 8964879) \times 48$

$= 13.16$

So, all inputs:

Sum of all inputs:

$$x_1 + x_2 + x_3 + x_4 = 43.58$$

Hidden Layer 1 (ReLu) weights = 0.2

$$h1 = h2 = 0.2\,(43.58) = 8.72$$

Hidden Layer 2 (ReLu) weights = 0.1

$$h3 = h4 = 0.1\,(h1 + h2) = 0.1 \times 17.44 = 1.744$$

Output (Sigmoid), weights = 0.3, bias = 0.5

$$z_1 = z_2 = 0.5 + 0.3\,(h3 + h4) = 0.5 + 0.3(3.488)$$
$$= 1.55$$

Sigmoid:

$$O_1 = O_2 = \sigma(1.55) = \frac{1}{1 + e^{(-1.55)}} = \frac{1}{1 + 2.72^{(-1.55)}}$$

$$= 0.824$$