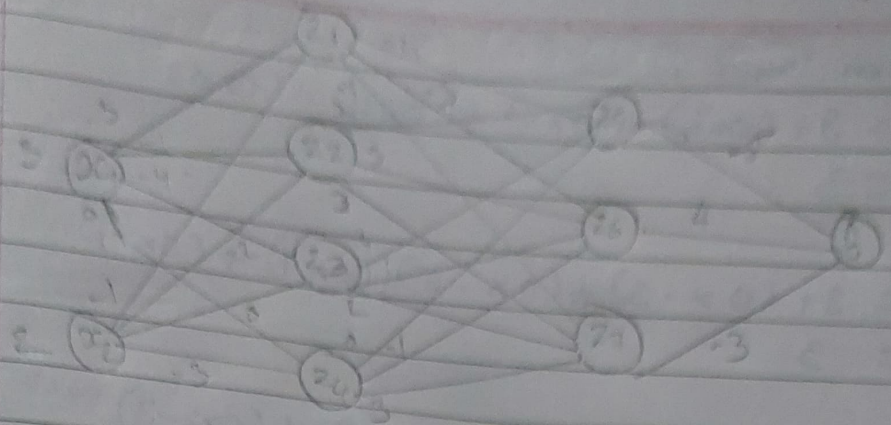

$$z = w_0 + \sum_{i=0}^{n} w_i x_i$$

Hidden layer 1

$z_1 = 3 + (3x-3) + (2x-1)$

$= 3 + (-9) + (-2)$

$= -8$

$z_2 = 3 + (2x-2) + (3x-1)$

$= 3 + (-4) + (3) = -4$

$z_3 = 3 + (3x-4) + (2x0)$

$= 3 - 12 = 9$

$z_4 = 3 + (3x0) + (2x-3)$

$= 3 + 0 + (-6)$

$= -3$

Using Relu function.

$z_1 = \text{Relu}(0, -8) = \max(0, -8) = 0$

$z_2 = \text{Relu}(0, -4) = \max(0, -4) = 0$

$z_3 = \text{Relu}(0, -9) = \max(0, -9 = 0$

$z_4 = \text{Relu}(0, -3) = \max(0, -3) = 0$

Hidden layer 2

$z_5 = 3 + (0 \times 4) + (0 \times 2) + (0 \times 4) + (0 \times 0)$

$= 3$

$z_6 = 3 + (0 \times -3) + (0 \times -5) + (0 \times 1) + (0 \times -1)$

$= 3$

$z_7 = 3 + (0 \times -1) + (0 \times 3) + (0 \times 2) + (0 \times -3)$

$= 3$

Using Relu function.

$z_5 = 3$, $z_6 = 3$, $z_7 = 3$.

$\hat{y} = 3 + (3 \times -5) + (3 \times 4) + (3 \times -3)$

$= -12 + 12 - 9$

$= -9$

$\hat{y} = \frac{1}{1 + e^{-(-9)}} = \frac{1}{1 + e^{9}} = 0.0001234$