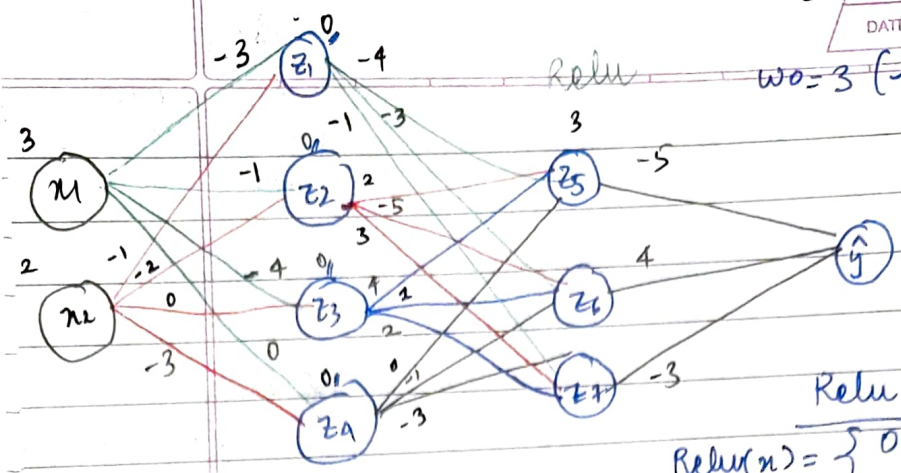
Estimate the value of ybar for first iteration in Relu = (Feed forward)



$$\text{Relu}(x) = \begin{cases} 0, & \text{if } x < 0 \\ x, & \text{if } x >= 0 \end{cases}$$

~~$z_1 = (3)(-3) + (3)(-1) + (3)(-4) + (3)(0)$~~

$= -9 - 3 - 12$

$= -24$ ⇒ Relu $(z_1) = 0$

$w_0 = 3$

~~$z_2 =$~~

For z_1

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

$= -9 - 2 + 3$

$= -8$ Relu $(-8) = 0$

For z_2

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

$= -3 - 4 + 3$

$= -4$ Relu $(-4) = 0$

For z_3

$z_3 = (3)(-4) + (2)(0) + 3$

$= -12 + 0 + 3$

$= -9$ Relu $(-9) = 0$

For z_4

$z_4 = (-3)(2) + (3)(0) + 3$

$= -3$ Relu $(-3) = 0$

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$z_5 = (0)(-4) + (0)(2) + (0)(4) + (0)(0) + 3$

$= 3$

$z_6 = 3$ $\quad$ $Relu(3) = 3$

$z_7 = 3$ $\quad$ $Relu(3) = 3$

For z

$= (3)(-5) + (3)(4) + (3)(-3)$

$= -15 + 12 - 9 + 3$

$= -3 - 9 + 3 = -9$ //

For sigmoid functn

$$\hat{y} = \frac{1}{1 + e^{-z}}$$

$$\hat{y} = \frac{1}{1 + e^{9}}$$

$$\hat{y} = 0.00012\cancel{3}$$