2. $z_i = \omega_1 x_{i-1} + \omega_2 x_i + \omega_3 x_{i+1},$

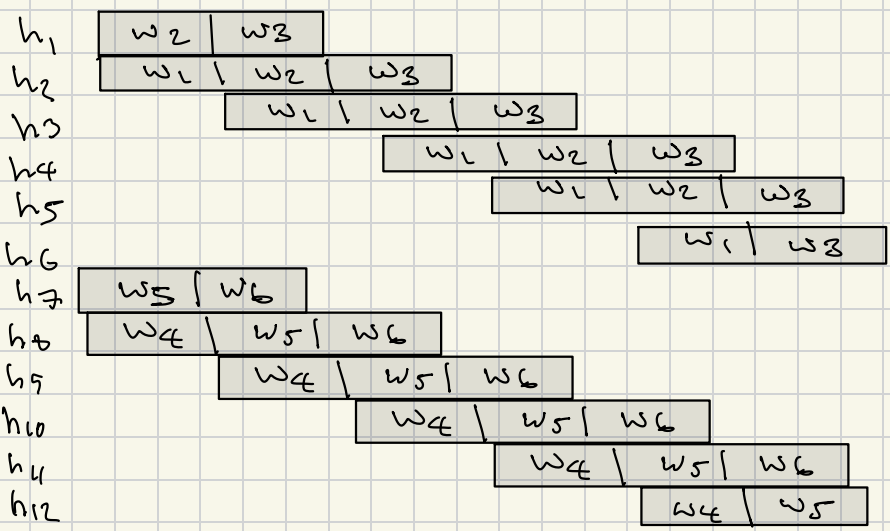
$z_1 = w_1 x_{2i-2} + w_2 x_{2i-1} + w_3 x_{2i}$

4. Use formula:

$$\text{input index} = S(i-1) + d(j-1)$$

i: index of output position; j: kernel index

6.



8. For the first layer: $3 \times 8 \times 4 = 36$ weights, 4 biases

For the second layer: $4 \times 5 \times 10 = 200$ weights. 10 biases.

(One bias per output channel).

10. First layer: $1 + (7-1) = 7$
Second layer: $7 + (7-1) = 13$
Third layer: $13 + (7-1) = 19$

∴ receptive field is 19

12. Each step looks at $\frac{100}{4000}$ of the data.

We have 100,000 steps - so it sees the data.

$\frac{100}{4000}\ 100{,}000 = 2500$ epochs.

14. Number of weights: $5 \times 5 \times 3 \times 10 = 750$
Number of biases: 10