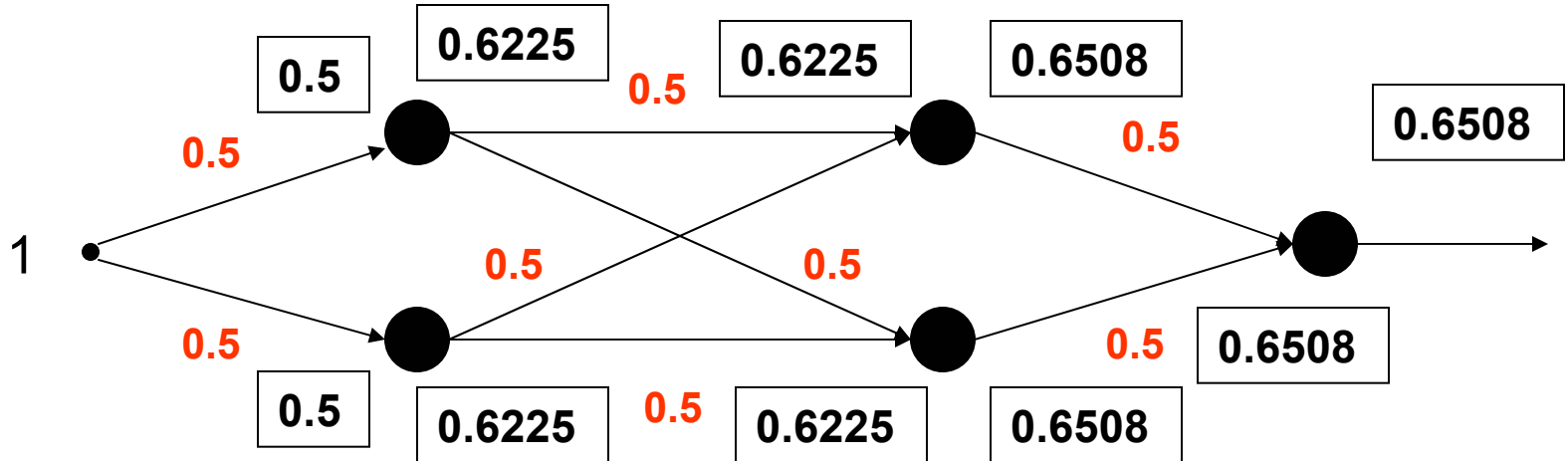


# First Pass

$$\delta_1 = \phi' \{ \sum (\delta_2)(\text{weight}) \} = (0.6225)(1 - 0.6225)(0.2669)(0.5)(2) = 0.0627$$

$$\delta_2 = \phi' \{ \sum (\delta_3)(\text{weight}) \} = (0.6508)(1 - 0.6508)(2.3492)(0.5) = 0.2669$$

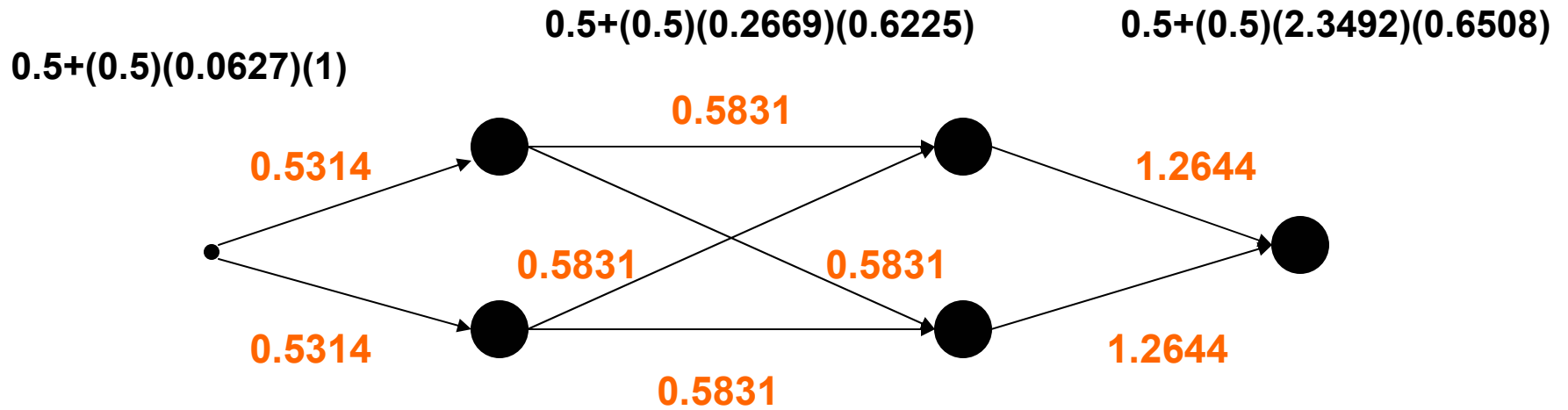


$$\delta_3 = \phi'(\text{error}) = (1)(0.3492) = 2.3492$$

$$\text{Error} = 3 - 0.6508 = 2.3492$$

# Weight Update 1

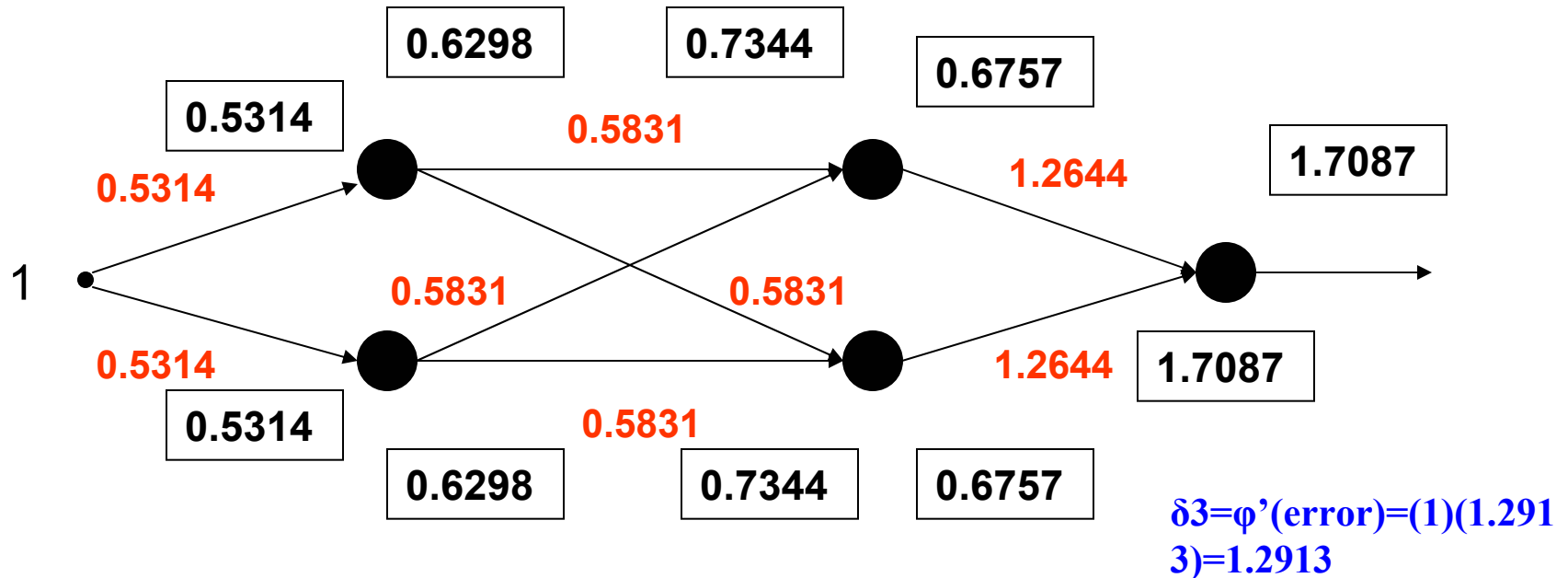
New Weight = Old Weight + {(learning rate)(sensitivity)(prior output)}



# Second Pass

$$\delta_1 = \phi' \{ \sum (\delta_2)(\text{weight}) \} = (0.6298)(1 - 0.6298)(0.5831)(0.3578)(2) = 0.0973$$

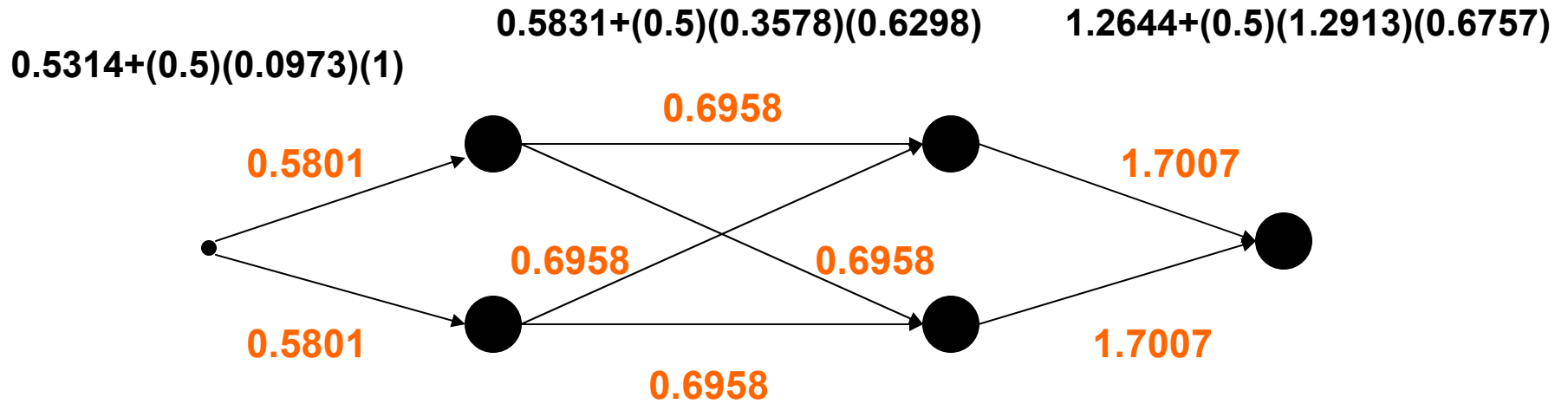
$$\delta_2 = \phi' \{ \sum (\delta_3)(\text{weight}) \} = (0.6757)(1 - 0.6757)(1.2913)(1.2644) = 0.3578$$



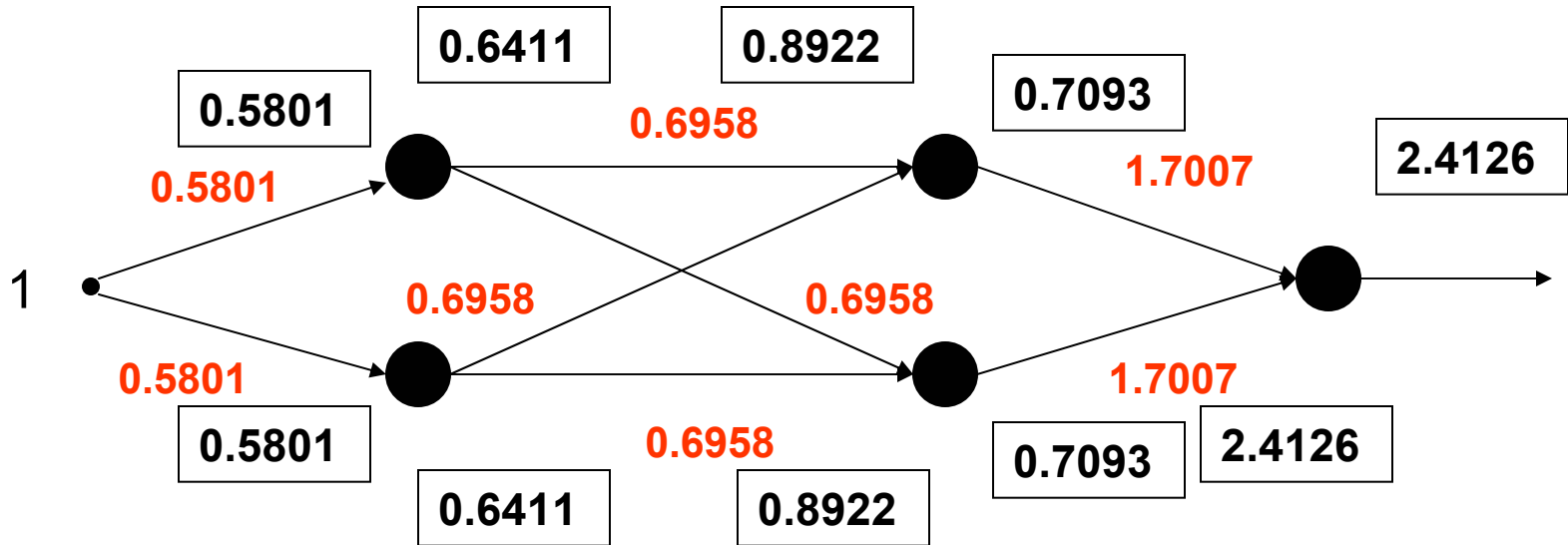
$$\text{Error} = 3 - 1.7087 = 1.2913$$

# Weight Update 2

New Weight = Old Weight + {(learning rate)(sensitivity)(prior output)}



# Third Pass



# Weight Update Summary

	Weights			Output	Expected	Error
	w1	w2	w3			
Initial conditions	0.5	0.5	0.5	0.6508	3	2.3492
Pass 1 Update	0.5314	0.5831	1.2644	1.7087	3	1.2913
Pass 2 Update	0.5801	0.6958	1.7007	2.4126	3	0.5874

W1: Weights from the input to the input layer

W2: Weights from the input layer to the hidden layer

W3: Weights from the hidden layer to the output layer