9-9-26

1. Current input (x_t), output from previous input (h_{t-1}), cell state from previous time (c_{t-1})
2. Output of this layer (h_t) and cell state of this layer (c_t)
3. Cell state (c_{t-1})
4. Cell state (c_t)
5. a) all b) x and ht-1 c) x and ht-1
6. all
7. all
8. \[1 * 2, 4 * 6, 5 * 9] = [2, 24, 45]
9. $$\frac{1}{1+e^{-(W_f x_t + U_f h_{t-1} + b_f)}}$$

   where W_f and U_f are weights bf is a bias, xt is the input and ht-1 is the output of prev
10. $$c_t = f_t \circ c_{t-1} \circ i_t \circ \frac{e^Y - e^{-Y}}{e^Y + e^{-Y}} \quad \text{Where } Y = W_f x_t + U_f h_{t-1} + b_f$$