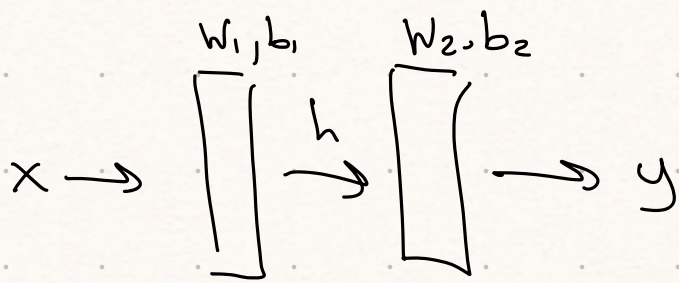


$$\underbrace{32}_{\text{output channels}} \times \underbrace{3}_{\text{input channels}} \times \underbrace{3 \times 3}_{\text{filter size}}$$



$$h = w_1 x + b_1$$

$$y = w_2 h + b_2$$

$$y = w_2 (w_1 x + b_1) + b_2$$

$$= \underbrace{(w_2 w_1)}_{\text{matrix}} x + \underbrace{(w_2 b_1 + b_2)}_{\text{vector}}$$