



$$y = 1 \quad \text{if} \sum_{i=1}^n w_i * x_i \geq \theta$$
$$= 0 \quad \text{if} \sum_{i=1}^n w_i * x_i < \theta$$

Rewriting the above,

$$y = 1 \quad \text{if} \sum_{i=1}^n w_i * x_i - \theta \geq 0$$
$$= 0 \quad \text{if} \sum_{i=1}^n w_i * x_i - \theta < 0$$