CSc 177 Final Question 12

Height	Weight	Class
5	0 | Low	Yes | 1
6	1 | medium	no | 0
8	2 | high	yes | 1

class for $h=7$, $w=2$

$X=(h=7, w=2)$

$P(X \mid yes) = P(h=7 \mid yes) \cdot P(w=2 \mid yes)$

$= P(h=7 \mid yes) \cdot 1/2$

$P(X \mid yes) = P(h=7 \mid yes) \cdot 1/2$

$P(x \mid no) = p(h=7 \mid no) \cdot P(w=2 \mid no)$

$= P(h=7 \mid no) \cdot 0$

$P(x \mid no) = 0$

According to Naive Bayes, a height of 7 with weight of heavy will be class "yes" because $1/2 \cdot P(h=7 \mid yes) > 0 \cdot P(h=7 \mid no)$