

$$P(H_2) = 1 - y$$

Prior
↓

H_1 = Elvis has an identical twin.
 H_2 = Elvis' twin was not identical

3)	$P(H)$	$P(D H)$	$P(H)P(D H)$	$P(H D)$
H_1	0.08	1	0.08	0.148148
H_2	0.92	0.5	0.46	0.851852

The probability that Elvis was an identical twin is 0.148.

8) $H = \{A, B, C\}$ where the car is behind the door

D	$P(H)$	$P(D H)$	$P(H)P(D H)$	$P(H D)$
A	$\frac{1}{3}$	p	$\frac{p}{3}$	$\frac{p}{p+1}$
B	$\frac{1}{3}$	0	0	0
C	$\frac{1}{3}$	1	$\frac{1}{3}$	$\frac{1}{p+1}$

$$= \frac{p+1}{3} \cdot p$$

$$P(H_A|D) = \frac{\frac{p}{3}}{\frac{p+1}{3}} = \frac{p}{p+1}$$

$$P(H_C|D) = \frac{\frac{1}{3}}{\frac{p+1}{3}} = \frac{1}{p+1}$$

The probability the car is behind Door A is $\frac{p}{p+1}$.