

• For $x = M$

$$P(x=M | y_0^1, y_0^2) = \frac{P(x=M | y_1^1, y_1^2) P(F|y_0^1) P(F|y_0^2)}{P(x=F|y_1^1) P(x=F|y_1^2)}$$

$$= \frac{0.11 \times 0.4 \times 0.3}{0.29 \times 0.15}$$

$$= 0.3034$$

• For $x = A$

$$P(x=A | y_0^1, y_0^2) = \frac{P(x=A | y_1^1, y_1^2) P(A|y_0^1) P(A|y_0^2)}{P(x=A|y_1^1) P(x=A|y_1^2)}$$

* Note: \rightarrow As in question the value of $P(x=A | y_1^1, y_1^2) = 0.2$ which exceeds the total value of more than 1 we have assumed it to be 0.02

Now using $P(x=A | y_1^1, y_1^2) = 0.02$ we get.

$$= \frac{0.02 \times 0.2 \times 0.1}{0.01 \times 0.05}$$

$$= 0.8$$

Now adding the probability to check value w.r.t 1.