



$P(O)$ = prob of orange truck

$P(Y)$ = prob of yellow truck

$P(M^+)$ = prob of man correct identification of truck

$P(M^-)$ = prob of man INCORRECT identification of truck

Based on the tree diagram above and our example in class, I think this is the correct answer:

$$P(O|M^+) = \frac{P(M^+|O)P(O)}{P(M^+)} = \frac{P(O \cap M^+)}{P(M^+)} = \frac{P(O \text{ and } M^+)}{P(M^+)} = \frac{P(O)P(M^+)}{P(M^+)} = 0.8$$

But I feel I need to consider the probability of the man saying it is orange when it is yellow: $P(Y \cap M^-)$, as we did in class for the positive tests from those without cancer