Q.1) $P(A|B) = \frac{P(B|A)P(A)}{P(B)}$

$P(\text{Passing}) = 0.9$, $P(\text{Quickly}|\text{Passing}) = 0.6$,

$P(\text{Quickly}|\text{Not passing}) = 0.3$

$\therefore P(\text{Not passing}) = 1 - 0.9$

$= 0.1$

$$P(\text{Passing}|\text{Quickly}) = \frac{P(\text{Quickly}|\text{Passing})\,P(\text{Passing})}{P(\text{quickly})}$$

$$= \frac{0.6 \cdot 0.9}{P(\text{Quickly})}$$

$P(\text{Quickly}) = P(\text{Quickly}|\text{Passing})P(\text{Passing}) + P(\text{Quickly}|\text{Not Passing})P(\text{Not passing})$

$= 0.6 \cdot 0.9 + 0.3 \cdot 0.1$

$= 0.57$

$$P(\text{Passing}|\text{Quickly}) = \frac{0.6 \cdot 0.9}{0.57} = 0.9473$$