Name:_____

We are told Pr(A)=0.5, Pr(B)=0.4 and Pr($A \cap B$)=0.3

a) Find Pr(A|B)

$$= \frac{Pr(A \cap B)}{Pr(B)}$$

$$= \frac{0.3}{0.4}$$

$$= 0.75$$

b) Find Pr(B|A)

$$= \frac{Pr(B \cap A)}{Pr(A)}$$

Note: $B \cap A = A \cap B$

$$= \frac{0.3}{0.5}$$

$$= 0.6$$

c) Given that B happens, what is the probability that A occurs?

$$Pr(A|B) = 0.75$$

d) Given that A happens, what is the probability that B occurs?

$$Pr(B|A) = 0.6$$