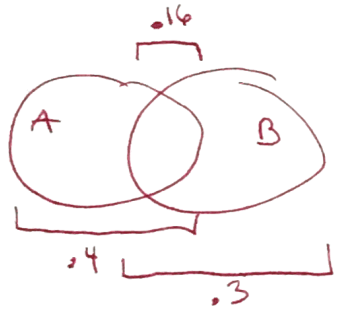
quiz 13
math2228
u new haven
m 28 oct

name: Solution

1 (4 points each). Suppose that $P(A) = 0.4$, $P(B) = 0.3$, and $P(B|A) = 0.4$.
(a) Find the probability that both A and B occur.
(b) Use a Venn diagram to explain your calculation.
(c) What is the probability of the event that "B occurs and A does not"?

a) $P(A \text{ and } B) = P(A)P(B|A) = (0.4)(0.4) = \underline{0.16}$

b)



c) $P(A^c \text{ and } B) =$ ~~$P(B) - P(B|A)$~~

$= P(B) - P(B \text{ and } A)$

$= .3 - .16$

$= .14$