adv.stats.mod4.R

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#problem 1  
#probability of event A:   
30/90

## [1] 0.3333333

#probability of event B:   
30/90

## [1] 0.3333333

#probability of event A or B:   
(30/90)+(30/90)-(10/90)

## [1] 0.5555556

#probability of event A and B:  
(30/90)+(30/90)

## [1] 0.6666667

#problem 2  
#B1: yes the answer it true!   
#B2: explanation- Bays Rule: The conditional Probability of "A" given"B" can be,   
#from the Conditional probability of B given A by using   
#P(A|B)= ((P(B|A)\*P(A))/(P(B|A)\*P(A)) + ((P(B|A)\*P(A))  
  
#Apply the rule to the given events:   
A1<- 5/365  
A2<- 360/365  
B\_A1<- 0.9  
B\_A2<- 0.1  
  
(A1\*B\_A1)/((A1)\*(B\_A1)+(A2)\*(B\_A2))

## [1] 0.1111111

#problem 3:   
dbinom(0,size = 10,prob = 0.20)

## [1] 0.1073742