

$$\boxed{GG} \neq 5 \quad \frac{\text{Bill}}{0.3} \quad \frac{\text{Bob}}{0.25}$$

Bill Bob Bill Bob

a)  $(0.7)(0.25) = .175$

ii)  $\frac{\text{Bill}}{(0.7)} \frac{\text{Bob}}{(0.75)} \frac{\text{Bill}}{(0.7)} \frac{\text{Bob}}{(0.75)} \frac{\text{Bill}}{(0.3)} = 0.0827$

(iii) Bill Bob Bill Bob Bill Bob  
 $(0.7) (0.75) (0.7) (0.75) (0.7) (0.25)$

$n=3 \quad (0.7)^3 (0.75)^2 (\cancel{0.7}) (0.25)$

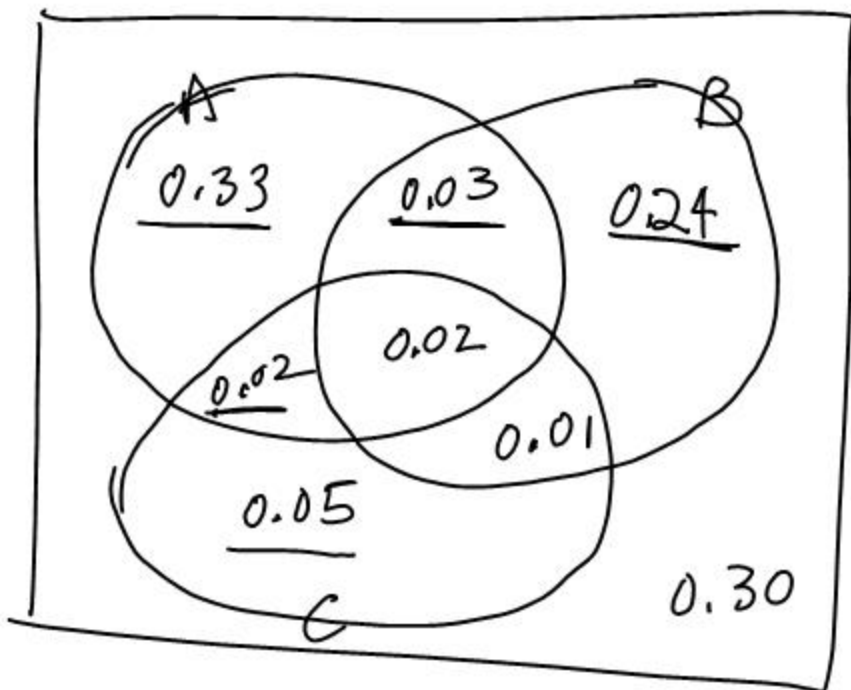
$n^{\text{th}} \text{ shot} \quad \underline{\underline{(0.7)^n (0.75)^{n-1} (0.25)}}$

Find the prob. that Bill wins.

Bill Bob Bill  
 $0.3 + (0.7)(0.75)(0.3) + (0.7)^2(0.75)^2(0.3)$   
 $+ (0.7)^3(0.75)^3(0.3) + \dots =$

6F #3

$$\begin{array}{r}
 .33 \\
 .24 \\
 .05 \\
 .08 \\
 \hline
 .70
 \end{array}$$



6G #3

$$P(R, R, R) = \frac{\binom{7}{3}}{\binom{12}{3}} = \frac{7}{44}$$

(OR) 
$$P(R, R, R) = \frac{7}{12} \cdot \frac{6}{11} \cdot \frac{5}{10} = \frac{7}{44}$$

R, R, Y

R, Y, Y

Y, R, Y

⋮

(b) 
$$1 - P(RRR) - P(YYY)$$

$$1 - \frac{7}{44} - \frac{5}{12} \cdot \frac{4}{11} \cdot \frac{3}{10}$$

(OR) 
$$1 - \frac{7}{44} - \frac{\binom{5}{3}}{\binom{12}{3}}$$

HW

6H #1-4