Your Name	
Your UnetID	

Equations:

Product rule: $P(A,B) = P(A|B) \cdot P(B)$ *extend to more variables*

$$P(x_1, x_2, x_3) = P(x_3|x_2, x_1) \cdot P(x_2, x_2) = P(x_3|x_2, x_1) \cdot P(x_2|x_1) \cdot P(x_1)$$

Probability Exercises:

How many terms do you add to get $\boldsymbol{P(b,\ j,\ m)}$? (Each term represents one realized events – so a product of all the conditional probabilities.)	
How does $\boldsymbol{P(b,\ j,\ m)}$ relate to $\boldsymbol{P(b|j,\ m)}$	
Given $P(A|+b, C), P(C|+b)$ What factor results from multiplying them together?	
Starting from that factor, what results if you sum out C ?	
What is $\boldsymbol{P(A, b_2, c_1, D)}$?	
What is $\boldsymbol{P(E|c_1, b_2)}$?	

$P(A)$	$P(b_2)$	$P(c_1|A)$	$P(D|A, b_2)$	$P(E|c_1, D)$