Exercise 1.
You are given the joint probability distribution $P(A, B, C, D) = P(A)P(B|A)P(C|A)P(D|B)$ with

$P(D|B)$	b_1	b_2		$P(C|A)$	a_1	a_2		$P(B|A)$	a_1	a_2		$P(A)$	a_1	a_2	
d_1	2/3	1/2	;	c_1	1	2/3	;	b_1	1/2	5/6	;		1/4	3/4	;
d_2	1/3	1/2		c_2	0	1/3		b_2	1/2	1/6					

Compute $P(A, B)$, $P(B)$, $P(A, C)$, $P(C)$, $P(B|A, C)$ and $P(A, C|B)$.