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CK0031/CK0248: Homework 03

Exercise 1.
You are given the following joint probability table $P(A, B)$

$P(A,B)$	b_1	b_2	b_3
a_1	0.05	0.10	0.05
a_2	0.15	0	0.25
a_3	0.10	0.20	0.10

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

Exercise 2.
You are given the following conditional and marginal probability tables, $P(A|B)$ and $P(B)$

$P(A\|B)$	b_1	b_2	b_3
a_1	0.4	0.3	0.6
a_2	0.6	0.7	0.4

$P(B)$	b_1	b_2	b_3
	0.4	0.4	0.2

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

Exercise 3. You are given the following joint probability table $P(A, B, C)$

$P(A,B,C)$	b_1	b_2
a_1	$(0.006, 0.054)$	$(0.048, 0.432)$
a_2	$(0.014, 0.126)$	$(0.032, 0.288)$

Compute $p(B, C)$ and $p(B)$.