

22s:039

Wednesday, March 5
Joint Discrete Distributions
Handout

1. In a one-minute time interval for a certain toll booth,
let X represent the number of cars that pass through the toll booth,
let Y represent the number of trucks that pass through the toll booth.

The joint probability mass function of X and Y is given in the following table:

		y		
		0	1	2
x	0	0.10	0.05	0.05
	1	0.10	0.10	0.05
	2	0.05	0.20	0.10
	3	0.05	0.05	0.10

- a) Find the marginal probability mass function $f_X(x)$ for X .

- b) Find $E(X)$.

More on back...

c) Find the marginal probability mass function $f_Y(y)$ for Y.

d) Find the conditional probability mass function for Y given $X=0$,
or $f_{Y|X=0}(y)$