1. 10 computers are going to delivered to a location, assume that each computer has 20% chance of being damaged after delivery. Denote X to be the number of computers that are not damaged.

A) Find E(X), Var(X), and P(X>3)

2. Let E(X)=10, Var(X)=22, Let Y=2X+4 find

A) E(Y)

B) Var(Y)

C) E(X+2Y)

D) Var(X+Y)

3. The joint distribution of X and Y is described below:

		X			
		0	1	2	3
Y	0	0.1	0.2	0	0
	1	0.2	0.25	0.05	0
	2	0	0.05	0.05	0.025
	3	0	0	0.025	0.05

A) Find marginal distribution of X and Y
B) Find E(X) and Var(X)
C) Find P(X+Y>3)
D) Find E(XY) and Covariance between X and Y

4. Suppose pdf of X is f(x)=$4x^3$, $0 \leq x \leq 1$. Find

A) $p(0 \leq x \leq \frac{1}{2})$

B) Find cdf of X

C) Find E(X)

D) Find Var(X)

3.7.11. Let X and Y have the joint pdf

$$f_{X,Y}(x, y) = 2e^{-(x+y)}, \quad 0 < x < y, \quad 0 < y$$

Find $P(Y < 3X)$.

Find marginal density of X