

Statistics XP84 - Quiz 2

NAME:

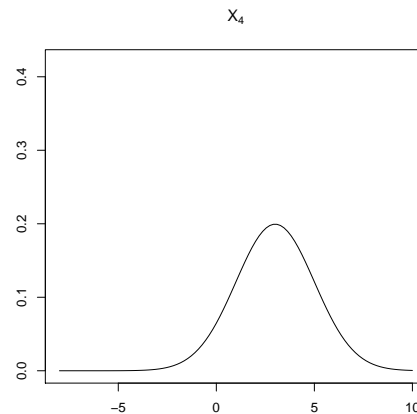
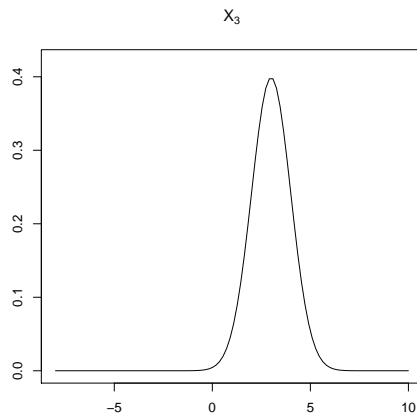
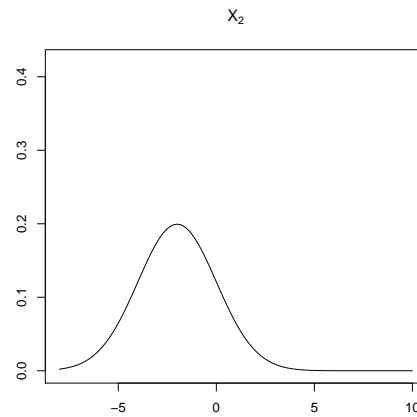
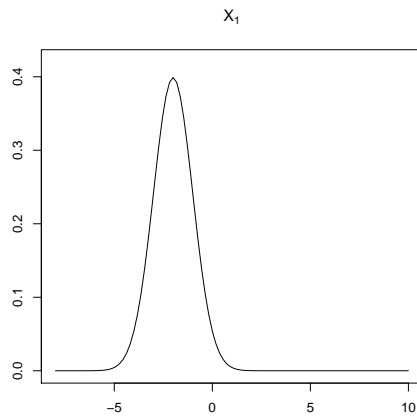
You have 15 minutes.
Each part of each question is worth 2 points.
There are two questions.

I pledge my honor that I have not violated the Honor Code
during this examination.

SIGNATURE:

Question 1

Below are the normal pdfs of X_1 , X_2 , X_3 , and X_4 .
Each X_i is normal with μ equal either -2 or 3.
Each σ is either 1 or 2.



(a) For X_1 ,
 $\mu = \text{-----}$, $\sigma = \text{-----}$

(b) For X_2 ,
 $\mu = \text{-----}$, $\sigma = \text{-----}$

(c) For X_3 ,
 $\mu = \text{-----}$, $\sigma = \text{-----}$

(d) For X_4 ,
 $\mu = \text{-----}$, $\sigma = \text{-----}$

Now suppose $R \sim N(6, 400)$.

(e) What is $P(R < -34)$?

(f) What is the cdf (cumulative distribution function) for R evaluated at -34?

Question 2

The table below gives the joint distribution of X and Y .

		X	
		0	1
Y	0	.08	.12
	1	.32	.48

(a)

What is $P(X = 0, Y = 1)$?

(b)

What is $P(X = 0)$?

(c)

What is $P(X = 0 | Y = 1)$?

(d)

Are X and Y independent?

(e)

Is X a Bernoulli random variable?

(f)

What is $E(X)$?

(g)

Which is bigger, $Var(X)$ or $Var(Y)$?