






















ProblemSet9 Questions

- When you say to give a Linear Regression Line should we give a line equation or should we give how Random Variables depend with each other. For example 1c should we give $X_2 + X_3 = \frac{1}{2}(X_1 + X_2)$ or $y = x/2$. In the other exercises we give the regression line as a set. I just don't get what a regression line is.
- For exercise 2 should we use the moment generating function or is there a trick.
- My calculations for 2c: x_3 means $E(X_3)$

1	 $n = 10$	
	 -10  10	
2	 $p = \frac{3}{10}$	
		$p = 0.3$
3	 $x_3 = n(n-1)(n-2)p^3 + 3n(n-1)p^2 + np$	
		$x_3 = 46.74$
4	 $x_2 = n(n-1)p^2 + np$	
		$x_2 = 11.1$
5	$x_1 = np$	
		$x_1 = 3$
6	 $c = x_3 + x_2 \cdot x_1$	
		$c = 80.04$
7	 $v = np(1-p)$	
		$v = 2.1$
8	 $b = \frac{(c+v)}{v}$	
		$b = 39.1142857143$
9	 $a = x_2 + x_1 + 1 - bx_1$	
		$a = -102.242857143$
		

But the values are not even close.

4. for exercise 3 what is the meaning behind it. What was the point of it accept the calculations and definitions.
5. Is the exercise 6 just doing the integral for everything or is there a trick to simplify.
6. When you find $F_{X|Y}$ how are the regions defined. Do we only give the region where the function is $0 < F < 1$ and we don't care where it is equal to 1 or 0 or we should also write these two regions. If yes how?