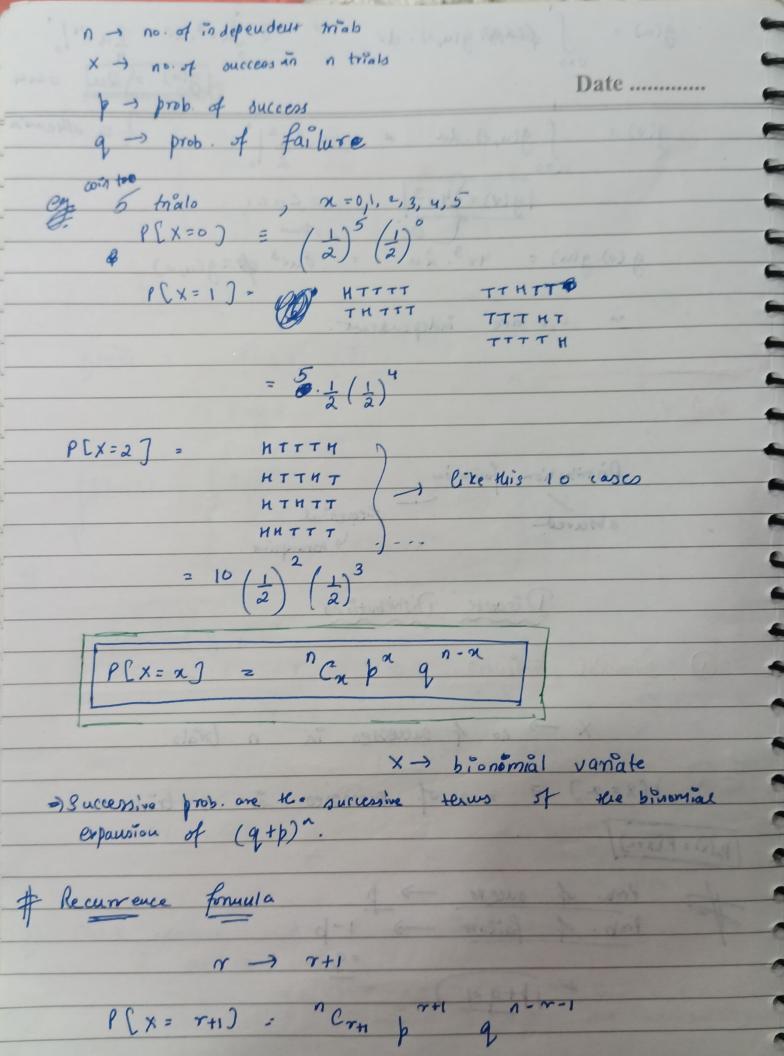
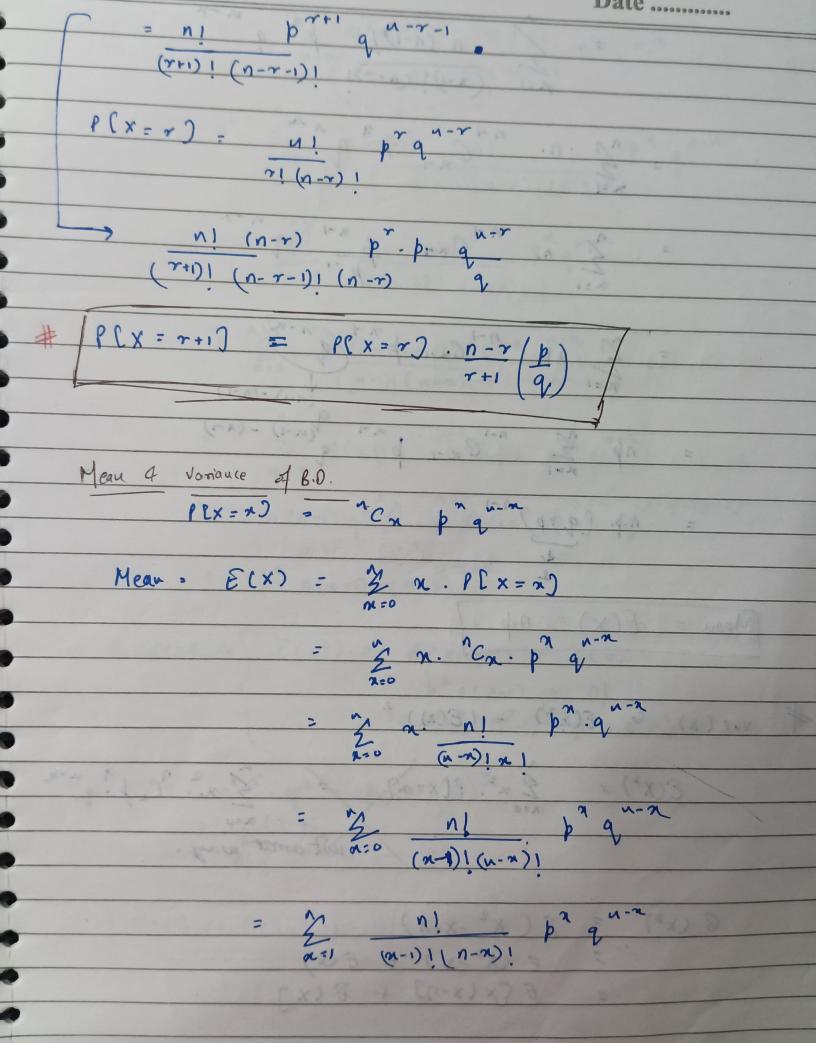
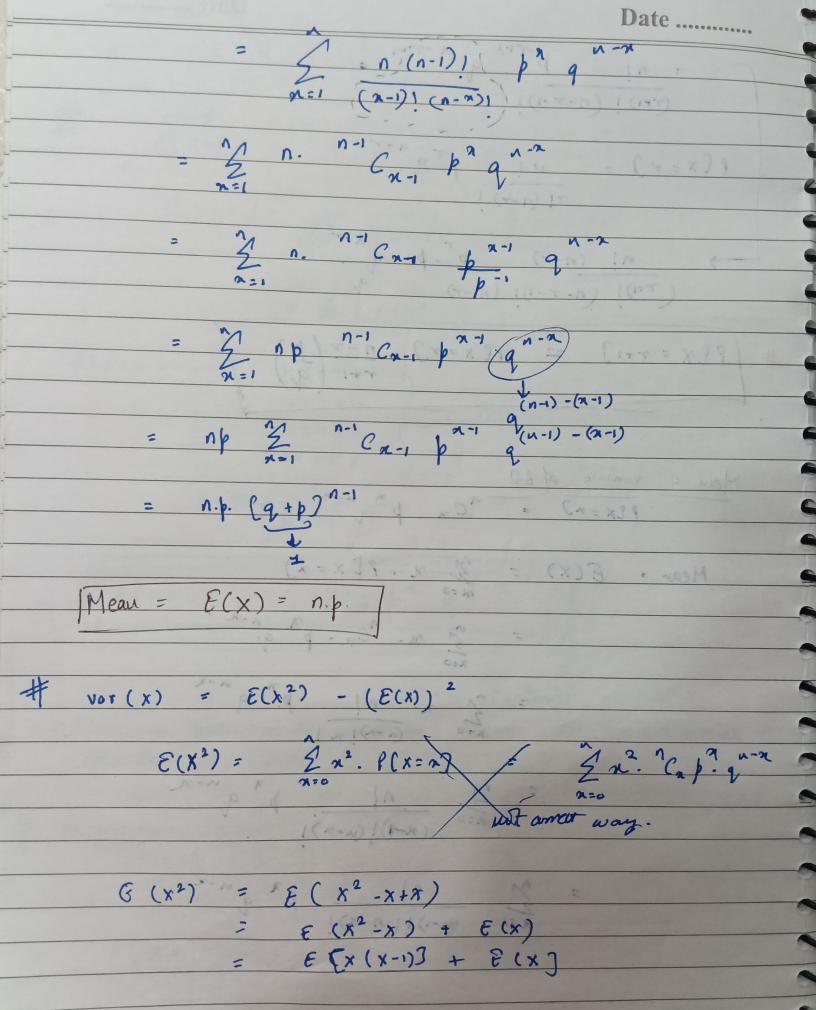
Unit -3	12 2
	A HTTTH & FE
Distribution functions	THITH
observed	Mecrotical Assumptions
	2 10/1/2/13
Disorte Dist	n'butions
Binomial Distribution	[x=x] = "C. por
X -> no. of succe	esses in n trals.
strong laminoid (-)	
I(x=2) = n no. of	successes in n-trials.
	"(d+p) of note.
$p_{n}(x) = P(x = x)$	
A Prob. of sucess ->	p de la
Prob. of failure -) 1-b
	= 9
4 1 1 1 + 9 = 1	
1-4-1	(x= x=1) = (1000 = X)

X







Spiral

E[x(x-1)) = 3 a(x-1). Cap ? qn-n Date $=\frac{1}{2}\alpha(n-1)\frac{n!}{2!(n-n)!}p^{n}u^{-n}$ = $\frac{1}{2}$ $\frac{$ $= \frac{1}{x=2} \frac{N!}{(x-2)!} \frac{p^2 q^{1-x}}{(n-x)!}$ $\frac{2}{x=2} \frac{\int_{-2}^{2} (n-1)(n-2)!}{(n-2)!} p^{2} q^{n-2}$ $= \sum_{n=1}^{\infty} n(n-1)^{n-2} C_{\alpha-2} p^{\alpha} q^{n-2}$ = $n(n-1) \cdot p^2 \int_{\alpha=2}^{2} \frac{1-2}{C_{\alpha-2}} p \frac{1-2}{q} \frac{(n-2)-(\alpha-2)}{q}$ = $p^2 n(n-1) (qyp)^{\frac{1}{n}-2}$ $\frac{\partial u_{n}(x)}{\partial x} = \frac{E(x^{2})}{E(x^{2})} = \frac{E(x(x-1))}{E(x)} + \frac{E(x)}{E(x)}$ $= \frac{p^{2}n(n-1)}{e^{2}n(n-1)} + \frac{np}{e^{2}n(n-1)} = \frac{n^{2}p^{2}-np^{2}+np}{e^{2}n(n-1)}$ var(x) = not - np - (np)2 Variance (x) = npg.

Spiral

Spiral

$$P(x=3) = {}^{6}e_{3} \left(\frac{8}{9}\right)^{3} \left(\frac{1}{9}\right)^{3}$$

one telephone no out of 15 called blu 2pm 4 3pm on weekdays is busy. What is the probability that if 6 roudburly selected nos are alled ii) not more than 3 will be busy.

(ii) at least 3 will be busy.

$$\frac{(1)}{2} P[X \angle 3] = P[X=0] + P[X=1] + P[X=2] + P[X=3]$$

$$= \frac{6}{6} \left(\frac{1}{15}\right)^{6} \left(\frac{14}{15}\right)^{6} + \frac{6}{6} \left(\frac{1}{15}\right) \left(\frac{14}{15}\right)^{5} + \frac{6}{6} \left(\frac{1}{15}\right)^{2} \left(\frac{14}{15}\right)^{4}$$

$$+ \frac{6}{6} \left(\frac{1}{15}\right)^{3} \left(\frac{14}{15}\right)^{3} \left(\frac{14}{15}\right)^{3}$$

· / (who is a min) P

