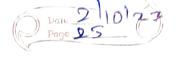
	Dare 2110123
	J.2.2 Resnoulli Dectrebution.
-5	Remaille Prestorbution depends on
	Bombulli Trad. [Also Known as Binomad trad]
=>	Bernoulli Treal: - It is a random
	Experiment that has only 2 outrons
	«Failure»).
	- Cretting a heads
	- cretting a ser on dice - cretting two heads when we tose two
	coin simultaneously.
	The state of the s
7	The distribution formed by Bernoulle Treal & called Bernoulli Dystribution
	Trem to court best 10 act pist to act
->	In an experiment whose outcome can be
	classified as either a success or fallure.
	let (10=1) of the outcome is surres an
	(x=0) if it is a failure,
	TI OMC 2
	The PMF & geren by, P(D) = P(x=0) = I-P P(1) = P(x=1) = P, where p & the Probability of success
	P(1)= P(x=1)= P, where p & the
	Probability of success
	7 % Bernoulli random varable.
	: P(x=x) = pt (1-p) x ; x= Toly

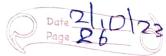


egt Tossing of com. cretting a had. P(x=1)= P(H)= 1/2 P(x=0)=P(T)=2/2 e.g.: x: oretting q s ? x p(x=1) = 1 | 6 p(x=0) = P(2|3|1|4|5) = 9/6e.g.: Tossing 2 coins sinultaniously. And, 2: Crifting 2 heads :PCX=19 - P(HH)=114 :-P(X=0) > P (TT) HT, TH) = 3/4 PMF = 600 (1) (3) CAU Loral, 2011) Example: A basketball flagor can shoot a ball

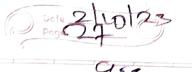
ento the basket with a probability of

D.G. what is the probability that he

misses the shot? => P(x=1)= 0.6, P(x=0)=J-P(x=1) 7-0-6-0.4 3) In case of the Bernoulli trad, thou are The case of the binomial distribution, we get The number of successes in a sequence of independent experimente.



Theorem: If the probability of occurrence of an event oprobability of success in a single treat of a Bernoulli's experiment 93 P. Then the probability that the event occurs exactly of times out of n-independent trials is equal to n (rgn-rp, where 9=1-P, the probability of -> Beguired probability = "Cr gr, p" P- Probability of Success n=T-p=Propublity of Failure n=Number of Indefindent Trals r=The number of times an event occurred => Y-1001; ofteng exaltly or successes means getting or successes and (n-r) faglures simultaneously. end n- & failuses) n-trate a-e Independent) [By product Theorem



obtained, are not specified. There are

not ways of choosing or trials for

successes.

once the orthogon for success, the remaining (n-r) trials should result in failures.

-> These "Co ways are metually exclusive.

-> In each of these "(~ ways,
Pagetting exactly & successes) = qn-rpr

Therefore, by addition theorem, the ocquired probability = n(x,g). P