

PROBABILITY AND STATISTICS-LABORATORY (CAP748)

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Questions

Let's say you want to know if gender has anything to do with political party preference. You have 440 voters in a simple random sample to find out which political party they prefer. The result of survey are shown below: Perform indirect method : To see if genders is linked to political party preference, perform a chi-square test of independence at 5% level.

ANSWER

OBSERVED				
	BJP	Congress	AAP	Total
MALE	100	90	30	220
FEMALE	140	60	20	220
TOTAL	240	150	50	440

EXPECTED			
	BJP	Congress	AAP
MALE	120	75	25
FEMALE	120	75	25

OBSERVED - EXPECTED			
	BJP	Congress	AAP
MALE	-20	15	5
FEMALE	20	-15	-5

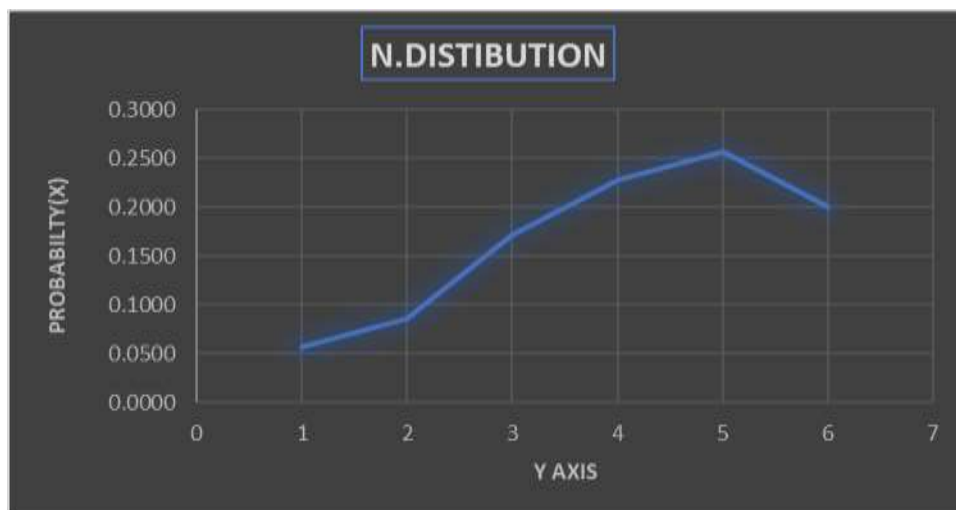
(OBSERVED-EXPECTED)^2			
	BJP	Congress	AAP
MALE	400	225	25
FEMALE	400	225	25

(OBSERVED-EXPECTED)^2/EXPECTED			
	BJP	Congress	AAP
MALE	3.333333	3	1
FEMALE	3.333333	3	1

SUM	14.67
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Q2.Implement Probability distribution for the following Data

CALCULATING PROBABILITY DISTRIBUTION IN EXCEL						
EVENT	XI	F	PROBABILITY P(X)	(xi-x)^2	(xi-x)^2 *p(x)	
A	1	2	0.0571	24.43	1.40	
B	2	3	0.0857	15.55	1.33	
C	3	6	0.1714	0.89	0.15	
D	4	8	0.2286	1.12	0.26	
E	5	9	0.2571	4.23	1.09	
F	6	7	0.2000	0.00	0.00	
TOTAL		35	1.0000	46.22	4.23	
MEAN		6.94				
STANDARD DEVIATION		2.06				



SNAPSHOT

