X - Bin (10, 0.6)

a.	PC	× 26	1=	1 - P	(x4	= 5)	-	0.633	
----	----	------	----	-------	-----	------	---	-------	--

b. M = np = 6 0 = (10(0.6)0.4) = 1.55 M+0 = (4.45, 7.55)

P(4.45 L×67) = P(56 ×67) = P(×67) = P(×64) = 0.667,

C. P(36×67) = P(×67) - P(×62) = 0.821

Section 3.5

68.a. X is hypergeometric N=20 M=12 n=6

6. P(x=2) = (12)(8) = 0.1192

of way socies was to

P(x=2) + P(x=0) + P(x=1) + P(x=2)

 $=\binom{0}{15}\binom{6}{8}+\binom{2}{15}\binom{2}{3}$

+ 0 -119 2 = 9 1 3 73

(70)

(20)

P(x27)=!- P(x=1)=1-[P(x=0) +P(x=1)]=10.9819

c. E(x) = 0.M = 3.6 $V(x) = (\frac{7.0 - 6}{20 - 1})6(0.6)[0.4] = 1.061$

J= 1030

(x)=nm

IDEAS COME FROM JIAN

69. * is hyper geometric n=6 N=12 M=7.
(3)(1) d= (3)(1)
u. P(x=5) = = = 0.114
U. P(x=5) = (8)(1) = 0.114
b. P(x=u)=1-P(x>u)=1-[P(x=5)+P(x=6)]
=1- [0114 + (7)(5)] = 0.879
(6)
(b)
C. E(x) = n.M = 3.5 V(x) = 0.795 620.892
. AD A FINA OF THE JUSTICE OF X DEC
P(x>4.392) = P(x=5)+P(x=6)= 0.121
180.0 = (8) (8) = (5=x))
d. We can approximate the hyper geometric distribution
with binomial if population and sucess vate are
high. Il n=5 M/N = 40/400 = 0.1
50 h(x 1/5, 40, 4001 ≈ b(x) 15,0.1)
P(x 45) 2 B (5)15,0.1)=0.999
72.
a. N=11 M=4 n=6
20 NOX = 6,491) FOR 19 113 X 9-15 (55 X 19
(4)(7)
C. E(x)=0M=36 VX) = 100Mpen=1001
(6)
PE(x)=nM =2.18

10 5 5 (FO : ON 5

DATE:

75 a. Sz afemalechild F= a male child

X = the number of Fish before the 2nd 5000

P(X=x)=nb(xj2,00) = ((x+2-1) (0.5)2(0.6) = (x+1)(0.5)x+2

6. P(x=2) =0 (188)

C. P (x 42) = \(\Siz, \dagger (x \); \(\dagger \) = 0.688

d. E(x)=r(1-p)

E(x+2) = 4

C. Arrivalis are is per hour so or =5(0.75)=3.

Section 3.6

79 F(x;5)

> a. P(x = 8) = P 0:432 (3 (1) - (3 (0)) 101= 114

b. P(x=8)=F(8;5)-F(7;1)=0.065

C. P(x Z9) = 1- P(x + 8) = 0.068

d. P(5 < x < 8) = F(8;5) > F(4;5) = 0.492

t. P(5 < x < 9) = F(7;5) - F(5;5) = 0,251

(5)(P)=+K

84	75 d. Se afrancisco Perodecallo
C	1. N= 10000 P = 0.001 M=NP=10 0 Inpg = 3.16
1/20	0(- H=10 P(x710) R 1- F(10) 10) = 9.417
,	C. V(x=0)= e-10 100 - e-10 = 0.0000 450
	0!
	980 0 = (26,2 x) dN 3 = 15 2 x) 9 0
86	u. P(y=u)=e-5 54 =0.175
	u! 5 = (9-1) x = (2) 7 %
10	3.P(x Zu)= 1-P(x 43)=1-F(3)5)=0.735
	$\varphi = \gamma s r x + 1$
	C. Arrivals are 5 per hour so u = 5(0.75)=3.75
	The state of the s
87	
15	a. > t = (4)(2)=8
	P(x=10) = F(10;8) - F(4;8) = 0.099
	6 P(x = 1) = P(7)) = 0 0 0 F
	b. For a 30 min period 2 = 4 (0.5)=2
	P(x=0) = P(0,2) = 0.135
20	CP(SCXC) = (3,0) - (810) = (2x5)
	C: E (x) =)t=2