	Α	В	С	D	Е	F	G	Н	I	J	K	L
1	Income dis	tribution of	f 1000 fami	lies follows	Normal distrib	oution with	Mean 4000	00 and S.D. 100	000. From t	his group or	ne family is	
2	selected at	random, co	mpute the	probability	that income of	this family	lies.					
3		i) below 45	5000 ii) mo	re than 420	00 iii) between	45000 to 5	50000					
4	Also estim	ate the num	ber of fami	lies whose	income lies							
5		i) atleast 40	6000 ii) atn	nost 50000	iii) between 35	000 to 500	00					
6												
7	Solution:-	Let, x=Inco	me									
	Here, we h			~~/	1000		10000					
9		Mean(μ)=	40000	S.D(σ)=	10000	N=	10000					
_	First Part											
		p = p(x < 450)					ST(45000,0					
		b. = $p(x>42$			0.42074029	1 (101d/l.D.B.) (12000,C),E),1)						
	iii) Req.pro	ob = p(4500)	0 <x<50000< td=""><td>0)</td><td>0.14988228</td><td colspan="6">NORM.DIST(50000,C9,E9,1)-NORM.DIST(45000,C9,E9,1)</td><td></td></x<50000<>	0)	0.14988228	NORM.DIST(50000,C9,E9,1)-NORM.DIST(45000,C9,E9,1)						
14												
$\overline{}$	Second Pa				27.42							
-		0. = N*p(x>			2743			46000,C9,E9,1))			
		b. = N*p(x<			8413			000,C9,E9,1)				
	iii) Req.pro	ob. = $N*p(3)$	5000 <x<50< td=""><td>0000)</td><td>5328</td><td>G9*(NOR</td><td>M.DIST(50</td><td>000,C9,E9,1)-</td><td>NORM.DI</td><td>ST(35000,C</td><td>(9,E9,1))</td><td></td></x<50<>	0000)	5328	G9*(NOR	M.DIST(50	000,C9,E9,1)-	NORM.DI	ST(35000,C	(9,E9,1))	
19												
20												
21						Name	Karina Kc					
22						Roll NO:	15					

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	А	В	С	D	Е	F	G	Н	I
1	fit Poisson	distribution	n to followi	ng data.					
2	No. of Acc	eidents:-	0	1	2	3	4	5	6
3	Noo. Of Days:-		195	91	40	20	10	3	1
4									
5	Table for e	expected fre							
6	X	f	f*x	Е					
7	0	195	0	160	Here, mean	n(μ)=	0.811	C14/B14	
8	1	91	91	130		N=	360		
9	2	40	80	53		E=	G\$9*POIS	SON(A8,G	\$8,0)
10	3	20	60	14					
11	4	10	40	3					
12	5	3	15	0					
13	6	1	6	0					
14		360	292	360					
15									
16					Name: Karina kc				
17						Roll No: 1	5		

	Α	В	С	D	E	F	G	Н
1	Fit binomia	al distrituti	on to given	data.				
2	No. of girls	:-	0	1	2	3	4	
3	No. of fam	ilies:-	20	112	244	115	21	
4								
5	Solution:-	Let x= Nun	nber of girls	5				
6	Here,we ha	ave						
7		n=	4	p=	0.5	N=	512	
8	Calculation	table of e	xpected fre	quencies				
9		x=r	x=r	x=r	x=r			
10		0	20	0.0625	32	Where,O=	equency	
11		1	112	0.25	128	E=Expected frequency		
12		2	244	0.375	192			
13		3	115	0.25	128			
14		4	21	0.0625	32			
15			512	1	512			
16		P(x=r)=		BINOMDIS	T(B10,C\$7,I	E\$7,0)		
17			E=	G\$7*D11				
18								
19						Name= Kai	rina Kc	
20						Roll NO: 15	5	

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	Α	В	С	D	Е	F	G	Н	ı
1					ntral moments.				
2	of centra	al tendency, N	Measures	of dispersion	on, skewness an	d kurtosis and	intrepret		
3	the resu								
4	45	50	60	70	75	50	80	85	70
5									
6	Solution	:- Calculation	n of first i						
7	X	(x-x*)	$(x-x^*)2$	$(x-x^*)3$	$(x-x^*)4$				
8	45	-19.5	380.25	-7414.875	144590.0625				
9	50	-14.5	210.25	-3048.625	44205.0625				
10	60	-4.5	20.25	-91.125	410.0625				
11	70	5.5	30.25	166.375	915.0625				
12	75	10.5	110.25	1157.625	12155.0625				
13	50	-14.5	210.25	-3048.625	44205.0625				
14	80	15.5	240.25	3723.875	57720.0625				
15	85	20.5	420.25	8615.125	176610.0625				
16	70	5.5	30.25	166.375	915.0625				
17	60	-4.5	20.25	-91.125	410.0625				
18		0	1672.5	135	482135.625				
	M	CA 5		10					
	Mean =	64.5	n =	10					
		t four central	1		_				
21	For	Value	Formula		For	Value	Formula		
22	m1 =	0	0		Mean =	64.5	64.5		
23	m2 =	167.25	167.25		S.D. =	12.93251716	12.933		
24	m3 =	13.5	13.5		β1 =	0.00004	4E-05		
25	m4 =	48213.5625	48214		b 2 =	1.723601922	1.7236		
26									
27					N 16 16				
28 29					Name: Karina Kc				
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	Α	В	С	D	E	F	G	Н	I	J	K
1	Fit Poisson	distributio	n to follow	ng data.							
2	No. of Def	ects	0	1	2	3	4	5			
3	No. of page	es	135	109	40	12	3	1			
4											
5	Solution:-	Let, $x = No$	of defects								
6		Table for e	xpected fre	quencies							
7	X	f	f*x	Е							
8	0	135	0	134	Here, Mea	n(μ)=	0.806667	C14/B14			
9	1	109	109	108		N=	300				
10	2	40	80	44		E=	133.903	G\$9*POISSON(A8,G\$8,0)			
11	3	12	36	12							
12	4	3	12	2							
13	5	1	5	0							
14		300	242	300							
15			Name:Karina Ko		ina Kc						
16						Roll:15					

	Α	В	С	D	Е	F	G	Н	İ	J	K	
1	A message	centre for	ward 4 mes	sages per r	ninute. Cor	npute the p	orobability [·]	that no. of	forwarded	message ar	e	
2	i) Exactly 5	message ii) less than	6 messages	iii) more t	ii) more than 8 message in an interval of two minutes						
3	iv) atmost 10 message in an interval of two				minutes v)	ninutes v)almost 13 messages in an interval of three minutes						
4												
5	solution:-L	et ,x=Numl	per of mess	ages								
6	Here,we h	ave										
7		Average(λ)=	4	per minute	2						
8	i) Req.prob	o. =p(x=5)=		0.156293								
9	ii) Req. pro	b. =p(x<6)=	=	0.78513								
10		Average(λ))=	8	For two m	For two mintues						
11	iii) Req. pr	ob. =p(x>8)	=	0.407453								
12	iv)Req. pro	b. =p(x≤10)=	0.815886								
13	Average(λ)= 12		For three i	mintues								
14	v) Req. prob. =p(x≥13)= 0.424035											
15						Name: Kar	ina kc					
16						Roll:15						

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	Α	В	С	D	Е	F	G	Н	I	J	K	L
1	Income dis	stribution of	f 1000 fami	lies follows	Normal distri	oution with	Mean 4000	00 and S.D. 100	000. From t	his group o	ne family is	
2	selected at	random, co	mpute the j	probability	that income of	this family	lies.					
3		i) below 45	5000 ii) mo	re than 420	00 iii) between	45000 to 5	50000					
4	Also estimate the number of families whose income lies											
5	i) atleast 46000 ii) atmost 50000 iii) between 35000 to 50000											
6												
7	Solution:-	Let, x=Inco	me									
8	Here, we h	ave										
9		Mean(μ)=	40000	$S.D(\sigma)=$	10000	N=	10000					
10	First Part											
11	i) Req.prob. =p(x<45000) 0.691462				0.69146246	NORM.DI	IST(45000,0	C9,E9,1)				
12	ii) Req.pro	b = p(x > 42)	(000)		0.42074029	1-NORM.	DIST(4200	0,C9,E9,1)				
13	iii) Req.pr	ob = p(4500)	0 <x<50000< td=""><td>))</td><td>0.14988228</td><td>NORM.DI</td><td>IST(50000,0</td><td>C9,E9,1)-NOR</td><td>M.DIST(45</td><td>5000,C9,E9</td><td>,1)</td><td></td></x<50000<>))	0.14988228	NORM.DI	IST(50000,0	C9,E9,1)-NOR	M.DIST(45	5000,C9,E9	,1)	
14												
15	Second Pa	rt										
16	i) Req.prol	b. = N*p(x>	=46000)		2743	G9*(1-NC	RM.DIST(46000,C9,E9,1))			
17	ii) Req.pro	b. = N*p(x<	<=50000)		8413	G9*NORN	M.DIST(500	000,C9,E9,1)				
18	iii) Req.pr	ob. $=N*p(3)$	5000 <x<50< td=""><td>0000)</td><td>5328</td><td>G9*(NOR</td><td>M.DIST(50</td><td>000,C9,E9,1)-</td><td>NORM.DIS</td><td>ST(35000,C</td><td>C9,E9,1))</td><td></td></x<50<>	0000)	5328	G9*(NOR	M.DIST(50	000,C9,E9,1)-	NORM.DIS	ST(35000,C	C9,E9,1))	
19												
20												
21						Name	Koyal Kc					
22						Roll NO:	16					

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	А	В	С	D	Е	F	G	Н	I	
1	fit Poisson	distribution	n to followi	ng data.						
2	No. of Acc	eidents:-	0	1	2	3	4	5	6	
3	Noo. Of D	ays:-	195	91	40	20	10	3	1	
4										
5	Table for e	expected fre								
6	X	f	f*x	Е						
7	0	195	0	160	Here, mean	n(μ)=	0.811	C14/B14		
8	1	91	91	130		N=	360			
9	2	40	80	53		E=		G\$9*POISSON(A8,G\$8,0)		
10	3	20	60	14						
11	4	10	40	3						
12	5	3	15	0						
13	6	1	6	0						
14		360	292	360						
15										
16						Name: Ko	yal kc			
17						Roll No: 1	6			

	Α	В	С	D	E	F	G	Н
1	Fit binomia	al distrituti	on to given	data.				
2	No. of girls	:-	0	1	2	3	4	
3	No. of fam	ilies:-	20	112	244	115	21	
4								
5	Solution:-	Let x= Nun	nber of girls	5				
6	Here,we ha	ave						
7		n=	4	p=	0.5	N=	512	
8	Calculation	table of e	xpected fre	quencies				
9		x=r	x=r	x=r	x=r			
10		0	20	0.0625	32	Where,O=observed frequence		
11		1	112	0.25	128	E=Expected frequency		
12		2	244	0.375	192			
13		3	115	0.25	128			
14		4	21	0.0625	32			
15			512	1	512			
16		P(x		BINOMDIS	T(B10,C\$7,I	E\$7,0)		
17			E=	G\$7*D11				
18								
19						Name= Ko	yal Kc	
20						Roll NO: 16	5	

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	Α	В	С	D	E	F	G	Н	I	J
1	From th	e given	data com	pute first fo	our central moi	nents. Also, co	mpute me	easures		
2	of centr	al tende	ncy, Mea	sures of dis	persion, skewn	ess and kurtosi	is and int	repret		
3	the resu	lt.								
4	45	50	60	70	75	50	80	85	70	60
5										
6	Solution				entral moments	S				
7	X	(x-x*)	` ,	$(x-x^*)3$	(x-x*)4					
8	45	-19.5	380.25		144590.0625					
9	50	-14.5	210.25		44205.0625					
10	60	-4.5	20.25	-91.125	410.0625					
11	70	5.5	30.25	166.375	915.0625					
12	75	10.5	110.25	1157.625	12155.0625					
13	50	-14.5	210.25	-3048.625	44205.0625					
14	80	15.5	240.25	3723.875	57720.0625					
15	85	20.5	420.25	8615.125	176610.0625					
16	70	5.5	30.25	166.375	915.0625					
17	60	-4.5	20.25	-91.125	410.0625					
18		0	1672.5	135	482135.625					
	Mean									
19	=	64.5	n =	10						
20	For firs	t four ce	ntral mo	ments						
21	For	Value	Formula	l	For	Value	Formula			
22	m1 =	0	0		Mean =	64.5	64.5			
23	m2 =	167.25	167.25		S.D. =	12.93251716	12.933			
24	m3 =	13.5	13.5		β1 =	0.00004	4E-05			
25	m4 =	48214	48214		b 2 =	1.723601922	1.7236			
26										
27										
28 29					Name: Koyal Kc					
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	Α	В	С	D	Е	F	G	Н	I	J	K
1	Fit Poissor	n distributio	n to follow:	ing data.							
2	No. of Def	ects	0	1	2	3	4	5			
3	No. of pag	es	135	109	40	12	3	1			
4											
5	Solution:-	Let, $x = No$	o. of defects								
6		Table for e	expected fre	quencies							
7	Х	f	f*x	Е							
8	0	135	0	134	Here, Mea	n(μ)=	0.806667	C14/B14			
9	1	109	109	108		N=	300				
10	2	40	80	44		E=	133.903	G\$9*POISSON(A8,G\$8,0)			
11	3	12	36	12							
12	4	3	12	2							
13	5	1	5	0							
14		300	242	300							
15						Name:Koy	al Kc				
16						Roll:16					

	А	В	С	D	Е	F	G	Н	İ	J	K
1	A message	centre for	ward 4 mes	sages per r	ninute. Cor	npute the p	orobability [·]	that no. of	forwarded	message ar	e
2	i) Exactly 5	message ii) less than	6 messages	iii) more t	han 8 mess	age in an ir	iterval of tw	vo minutes		
3	iv) atmost 10 message in an interval of two minutes v)almost 13 messages in an interval of three minutes										
4											
5	solution:-L	et ,x=Numl	per of mess	ages							
6	Here,we h	ave									
7		Average(λ)=	4	per minute	2					
8	i) Req.prob	o. =p(x=5)=		0.156293							
9	ii) Req. pro	b. =p(x<6)=	=	0.78513							
10		Average(λ))=	8	For two mintues						
11	iii) Req. pr	ob. =p(x>8)	=	0.407453							
12	iv)Req. pro	b. =p(x≤10)=	0.815886							
13	Average(λ)= 12			For three i	mintues						
14	v) Req. prob. =p(x≥13)= 0.424035										
15						Name: Koy	/al kc				
16						Roll:16					

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