	A	B	C	D	E	F	G	H	I	J	K	L
1	Income distribution of 1000 families follows Normal distribution with Mean 40000 and S.D. 10000. From this group one family is											
2	selected at random, compute the probability that income of this family lies.											
3		i) below 45000 ii) more than 42000 iii) between 45000 to 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=Income											
8	Here, we have											
9		Mean(μ)=	40000	S.D(σ)=	10000	N=	10000					
10	First Part											
11	i) Req.prob. =p(x<45000)				0.69146246	NORM.DIST(45000,C9,E9,1)						
12	ii) Req.prob. =p(x>42000)				0.42074029	1-NORM.DIST(42000,C9,E9,1)						
13	iii) Req.prob =p(45000<x<50000)				0.14988228	NORM.DIST(50000,C9,E9,1)-NORM.DIST(45000,C9,E9,1)						
14												
15	Second Part											
16	i) Req.prob. =N*p(x>=46000)				2743	G9*(1-NORM.DIST(46000,C9,E9,1))						
17	ii) Req.prob. =N*p(x<=50000)				8413	G9*NORM.DIST(50000,C9,E9,1)						
18	iii) Req.prob. =N*p(35000<x<50000)				5328	G9*(NORM.DIST(50000,C9,E9,1)-NORM.DIST(35000,C9,E9,1))						
19												
20												
21						Name	Karina Kc					
22						Roll NO:	15					

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	A	B	C	D	E	F	G	H	I
1	fit Poisson distribution to following data.								
2	No. of Accidents:-		0	1	2	3	4	5	6
3	Noo. Of Days:-		195	91	40	20	10	3	1
4									
5	Table for expected frequencies								
6	x	f	f*x	E					
7	0	195	0	160	Here, mean(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: Karina kc			
17						Roll No: 15			

	A	B	C	D	E	F	G	H
1	Fit binomial distritution to given data.							
2	No. of girls:-		0	1	2	3	4	
3	No. of families:-		20	112	244	115	21	
4								
5	Solution:-	Let x= Number of girls						
6	Here,we have							
7		n=	4	p=	0.5	N=	512	
8	Calculation table of expected frequencies							
9		x=r	x=r	x=r	x=r			
10		0	20	0.0625	32	Where,O=observed frequency		
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)=	BINOMDIST(B10,C$7,E$7,0)				
17			E=	G$7*D11				
18								
19						Name= Karina Kc		
20						Roll NO: 15		

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	A	B	C	D	E	F	G	H	I
1	**From the given data compute first four central moments. Also, compute measures**								
2	**of central tendency, Measures of dispersion, skewness and kurtosis and intrepret**								
3	**the result.**								
4	**45**	**50**	**60**	**70**	**75**	**50**	**80**	**85**	**70**
5									
6	**Solution:- Calculation of first four central moments**								
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**				
19	**Mean =**	**64.5**	**n =**	**10**					
20	**For first four central moments**								
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**		**b2 =**	**1.723601922**	**1.7236**		
26									
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28					Name: Karina Kc				
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	A	B	C	D	E	F	G	H	I	J	K
1	Fit Poisson distribution to following data.										
2	No. of Defects		0	1	2	3	4	5			
3	No. of pages		135	109	40	12	3	1			
4											
5	Solution:- Let, x = No. of defects										
6		Table for expected frequencies									
7	x	f	f*x	E							
8	0	135	0	134	Here, Mean(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 Kc					
16						Roll:15					

	A	B	C	D	E	F	G	H	I	J	K
1	A message centre forward 4 messages per minute. Compute the probability that no. of forwarded message are										
2	i) Exactly 5 message ii) less than 6 messages iii) more than 8 message in an interval of two 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:-Let ,x=Number of messages										
6	Here,we have										
7		Average(λ)=		4	per minute						
8	i) Req.prob. =p(x=5)=			0.156293							
9	ii) Req. prob. =p(x<6)=			0.78513							
10		Average(λ)=		8	For two mintues						
11	iii) Req. prob. =p(x>8)=			0.407453							
12	iv)Req. prob. =p(x≤10)=			0.815886							
13		Average(λ)=		12	For three mintues						
14	v) Req. prob. =p(x≥13)=			0.424035							
15						Name: Karina kc					
16						Roll:15					

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	A	B	C	D	E	F	G	H	I	J	K	L
1	Income distribution of 1000 families follows Normal distribution with Mean 40000 and S.D. 10000. From this group one family is											
2	selected at random, compute the probability that income of this family lies.											
3		i) below 45000 ii) more than 42000 iii) between 45000 to 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=Income											
8	Here, we have											
9		Mean(μ)=	40000	S.D(σ)=	10000	N=	10000					
10	First Part											
11	i) Req.prob. =p(x<45000)				0.69146246	NORM.DIST(45000,C9,E9,1)						
12	ii) Req.prob. =p(x>42000)				0.42074029	1-NORM.DIST(42000,C9,E9,1)						
13	iii) Req.prob =p(45000<x<50000)				0.14988228	NORM.DIST(50000,C9,E9,1)-NORM.DIST(45000,C9,E9,1)						
14												
15	Second Part											
16	i) Req.prob. =N*p(x>=46000)				2743	G9*(1-NORM.DIST(46000,C9,E9,1))						
17	ii) Req.prob. =N*p(x<=50000)				8413	G9*NORM.DIST(50000,C9,E9,1)						
18	iii) Req.prob. =N*p(35000<x<50000)				5328	G9*(NORM.DIST(50000,C9,E9,1)-NORM.DIST(35000,C9,E9,1))						
19												
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21						Name	Koyal Kc					
22						Roll NO:	16					

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	A	B	C	D	E	F	G	H	I
1	fit Poisson distribution to following data.								
2	No. of Accidents:-		0	1	2	3	4	5	6
3	Noo. Of Days:-		195	91	40	20	10	3	1
4									
5	Table for expected frequencies								
6	x	f	f*x	E					
7	0	195	0	160	Here, mean(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: Koyal kc			
17						Roll No: 16			

	A	B	C	D	E	F	G	H
1	Fit binomial distritution to given data.							
2	No. of girls:-		0	1	2	3	4	
3	No. of families:-		20	112	244	115	21	
4								
5	Solution:-	Let x= Number of girls						
6	Here,we have							
7		n=	4	p=	0.5	N=	512	
8	Calculation table of expected frequencies							
9		x=r	x=r	x=r	x=r			
10		0	20	0.0625	32	Where,O=observed frequency		
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)=	BINOMDIST(B10,C$7,E$7,0)				
17			E=	G$7*D11				
18								
19						Name= Koyal Kc		
20						Roll NO: 16		

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	A	B	C	D	E	F	G	H	I	J
1	**From the given data compute first four central moments. Also, compute measures**									
2	**of central tendency, Measures of dispersion, skewness and kurtosis and intrepret**									
3	**the result.**									
4	**45**	**50**	**60**	**70**	**75**	**50**	**80**	**85**	**70**	**60**
5										
6	**Solution:- Calculation of first four central moments**									
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**					
19	**Mean =**	**64.5**	**n =**	**10**						
20	**For first four central moments**									
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 =**	**48214**	**48214**		**b2 =**	**1.723601922**	**1.7236**			
26										
27										
28					Name: Koyal Kc					
29										
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	A	B	C	D	E	F	G	H	I	J	K
1	Fit Poisson distribution to following data.										
2	No. of Defects		0	1	2	3	4	5			
3	No. of pages		135	109	40	12	3	1			
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5	Solution:- Let, x = No. of defects										
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8	0	135	0	134	Here, Mean(μ)=		0.806667	C14/B14			
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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:Koyal Kc					
16						Roll:16					

	A	B	C	D	E	F	G	H	I	J	K
1	A message centre forward 4 messages per minute. Compute the probability that no. of forwarded message are										
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10		Average(λ)=		8	For two mintues						
11	iii) Req. prob. =p(x>8)=			0.407453							
12	iv)Req. prob. =p(x≤10)=			0.815886							
13		Average(λ)=		12	For three mintues						
14	v) Req. prob. =p(x≥13)=			0.424035							
15						Name: Koyal kc					
16						Roll:16					

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