2) The Durbin Watson test of the multiple regression, the model is

$$Y_t = \beta_0 + \beta_1 X_{t1} + \beta_2 X_{t2} + ... + \beta_p X_{p2} + \varepsilon_t, t = 1,2,...,T,\ p >= 2, T - (p+1) >= 1,$$

$$\mathbf{Y} = \mathbf{X\beta} + \boldsymbol{\varepsilon},$$

assumption:

$$(1)\ E(\boldsymbol{\varepsilon}) = \mathbf{0}, \quad (2)\ E(\mathbf{X}^T\boldsymbol{\varepsilon}) = \mathbf{0}, (3)\ \varepsilon_t \sim N(0, \sigma_\varepsilon^2), E(\boldsymbol{\varepsilon}\boldsymbol{\varepsilon}^T) = \sigma_\varepsilon^2 \times \begin{bmatrix} 1 & \rho & 0 & .... & 0 \\ \rho & 1 & \rho & .... & 0 \\ ... & \rho & 1 & .... & 0 \\ ... & ... & ... & ... & \rho \\ 0 & 0 & .... & \rho & 1 \end{bmatrix}$$

$$\boldsymbol{\varepsilon} = \mathbf{Y} - \mathbf{X\beta}, \boldsymbol{\varepsilon}\boldsymbol{\varepsilon}^T = (\mathbf{Y} - \mathbf{X\beta})^T(\mathbf{Y} - \mathbf{X\beta}), \frac{\partial(\boldsymbol{\varepsilon}\boldsymbol{\varepsilon}^T)}{\partial\boldsymbol{\beta}} = 0, \hat{\boldsymbol{\beta}} = (\mathbf{X}^T\mathbf{X})^{-1}\mathbf{X}^T\mathbf{Y},$$

$$\hat{\mathbf{Y}} = \mathbf{X}\hat{\boldsymbol{\beta}} = \mathbf{X}(\mathbf{X}^T\mathbf{X})^{-1}\mathbf{X}^T\mathbf{Y}, \mathbf{e} = \mathbf{Y} - \hat{\mathbf{Y}} = \mathbf{Y} - \mathbf{X}(\mathbf{X}^T\mathbf{X})^{-1}\mathbf{X}^T\mathbf{Y},$$

The constrains are $\mathbf{e^T X}, = \mathbf{0}$ and the degree of freedom is T-p-1.

But the collinearity of independent variables is a condition of $\mathbf{e^T X}, = \mathbf{0}$.

$\mathbf{e} = (\mathbf{I} - \mathbf{X}(\mathbf{X}^T\mathbf{X})^{-1}\mathbf{X}^T)\mathbf{Y}$, the error variance-covariance matrix is

$$E(\boldsymbol{\varepsilon}\boldsymbol{\varepsilon}^T) = E[(\mathbf{Y} - \mathbf{X\beta})(\mathbf{Y} - \mathbf{X\beta})^T] = E(\mathbf{YY^T}) - \mathbf{X\beta}E(\mathbf{Y^T}) - E(\mathbf{Y})\boldsymbol{\beta}^\mathbf{T}\mathbf{X^T}$$

$$+ \mathbf{X\beta\beta^T X^T} = E(\mathbf{YY^T}) - \mathbf{X\beta\beta^T X^T}, E(\mathbf{YY^T}) = \sigma_\varepsilon^2 \times \begin{bmatrix} 1 & \rho & 0 & .... & 0 \\ \rho & 1 & \rho & .... & 0 \\ ... & \rho & 1 & .... & 0 \\ ... & ... & ... & ... & \rho \\ 0 & 0 & .... & \rho & 1 \end{bmatrix} + \mathbf{X\beta\beta^T X^T}$$

$$E\left(\mathbf{ee}^T\right)=\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\ \backslash\right)E\left(\mathbf{YY}^{\mathbf{T}}\right)\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)^T$$

$$=\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)\left(\sigma_\varepsilon^2\times\begin{bmatrix}1&\rho&0&....&0\\\rho&1&\rho&....&0\\...&\rho&1&....&0\\...&...&...&...&\rho\\0&0&....&\rho&1\end{bmatrix}+\mathbf{X}\boldsymbol{\beta}\boldsymbol{\beta}^{\mathbf{T}}\mathbf{X}^{\mathbf{T}}\right)\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)^T$$

$$=\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)\left(\sigma_\varepsilon^2\times\begin{bmatrix}1&\rho&0&....&0\\\rho&1&\rho&....&0\\...&\rho&1&....&0\\...&...&...&...&\rho\\0&0&....&\rho&1\end{bmatrix}\right)\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)^T$$

$$=\sigma_\varepsilon^2\times\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)\begin{bmatrix}1&\rho&0&....&0\\\rho&1&\rho&....&0\\...&\rho&1&....&0\\...&...&...&...&\rho\\0&0&....&\rho&1\end{bmatrix}\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)^T$$

if $\rho=0, E\left(\mathbf{ee}^T\right)=\sigma_\varepsilon^2\times\left(\mathbf{I}-\mathbf{X}\left(\mathbf{X}^T\mathbf{X}\right)^{-1}\mathbf{X}^T\right)$

$$H_0:\rho=\rho_0, H_1:\rho\neq\rho_0, New\quad D.W.=\frac{\sum_{t=2}^{T}\left(e_t\times e_{t-1}\right)}{\sum_{t=1}^{T}e_t^2},$$

$New\quad D.W.<W_{1-\alpha/2}$ or $New\quad D.W.>W_{\alpha/2}\Rightarrow reject\quad H_0$

$$H_0:\rho\leq\rho_0, H_1:\rho>\rho_0, New\quad D.W.=\frac{\sum_{t=2}^{T}\left(e_t\times e_{t-1}\right)}{\sum_{t=1}^{T}e_t^2},$$

$New\quad D.W.>W_\alpha\Rightarrow reject\quad H_0$

$$H_0:\rho\geq\rho_0, H_1:\rho<\rho_0, New\quad D.W.=\frac{\sum_{t=2}^{T}\left(e_t\times e_{t-1}\right)}{\sum_{t=1}^{T}e_t^2},$$

$New\quad D.W.<W_{1-\alpha}\Rightarrow reject\quad H_0$

2.1).same independent variable value, but auto correlation coefficient is different:
2.1.1)Case 1:

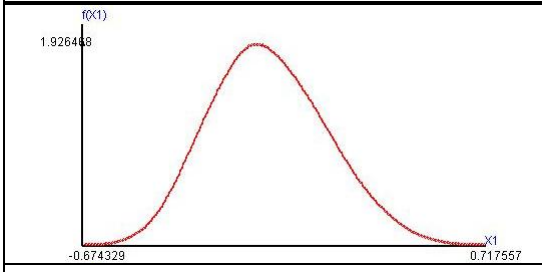
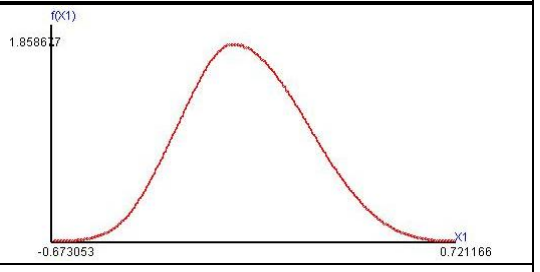
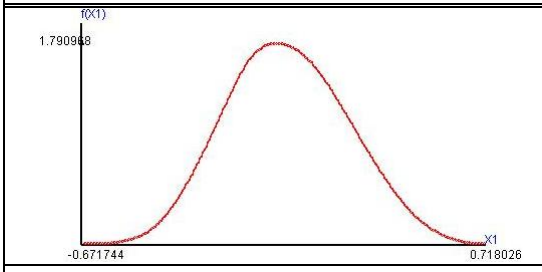
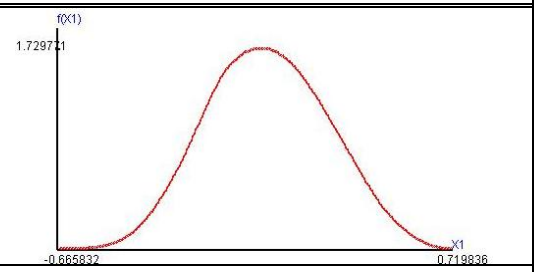
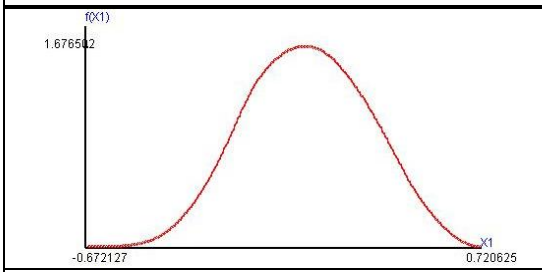
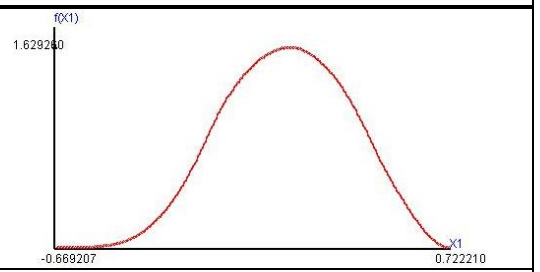
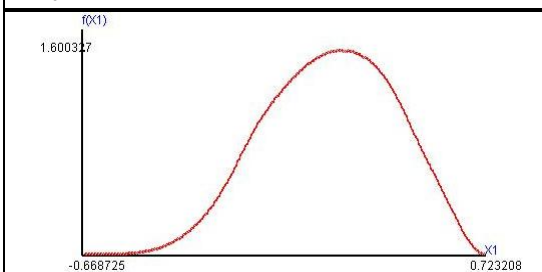
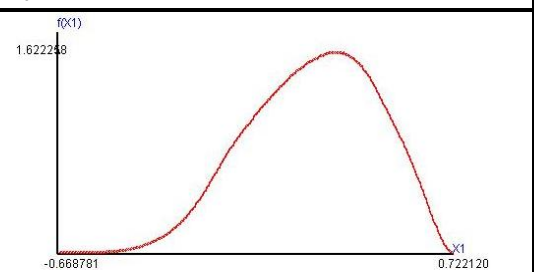
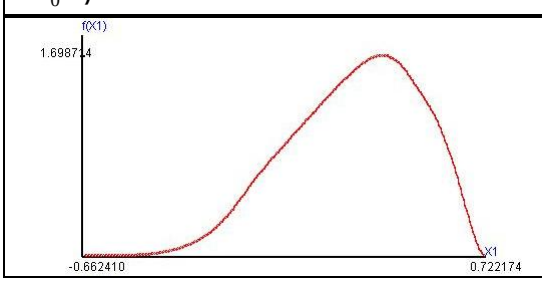
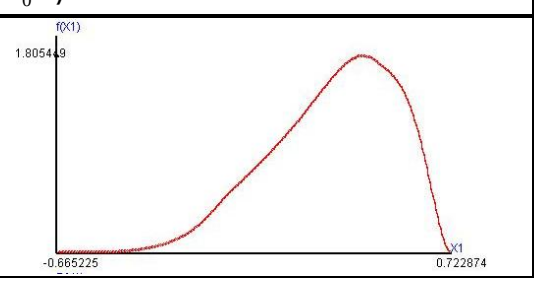
X1 X2 X3 X4 X5 X6

1 : 54.2327801017, -1.0515635183, -2.6129142144, 95.8729376089, 22.6710077518, -0.2330759733,
2 : 13.9250244388, 4.5308629808, -2.8927090373, 89.5992578910, 8.9801011409, -2.0197242513,
3 : 14.6498749197, 1.6952356061, -7.4321385213, 90.7336550626, 32.0067903020, 0.4088939995,
4 : 7.9783225134, 1.7818026806, -6.5196035366, 109.1869631249, 8.9810690255, 0.1523776054,
5 : 8.6762253740, 8.1590653669, -3.0465392653, 102.2317225115, 14.2386734597, 0.1328963108,
6 : 27.7623540858, 1.2328513211, -8.4102613007, 84.5890555624, 9.2839680305, 0.6524649479,
7 : 18.6625587758, 3.2933744224, -4.0086189009, 63.8968287439, 3.2012130715, 0.3515600164,
8 : 39.3319153828, 7.0312539167, -4.8855110925, 124.8773844220, 14.6127561535, 0.8325246655,
9 : 17.9656598313, -0.1333539865, -5.5127281095, 85.5531179580, 15.7406949223, -3.0863445859,
10 : 32.0610021717, 3.4854361980, -1.7108106596, 86.1964533707, 4.1842050838, -1.7323733277,
11 : 13.7528011906, -4.6549833265, -3.9099059591, 91.5492024874, 7.8007722665, -0.4902037820,
12 : 28.2464630681, 7.9737622105, -2.8270247690, 78.6405322222, 14.3222964868, 0.6649429561,
13 : 13.0932431125, 1.1946253885, -8.9544367518, 113.4092231132, 14.0899356091, 1.8632771636,
14 : 20.4243954765, -3.9039174396, -5.3385220478, 138.7602214818, 6.0689637971, -2.3724228711,
15 : 22.6946305148, 11.6094138960, -1.6969031058, 119.8805947892, 10.5394804672, -0.1477014572,

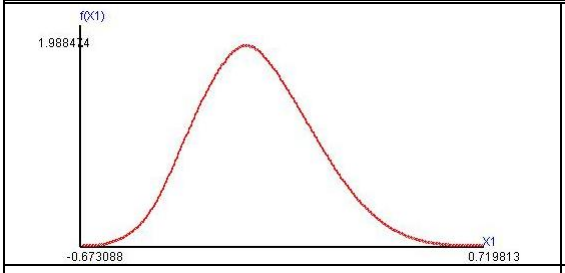
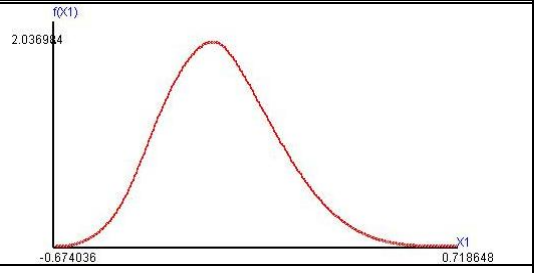
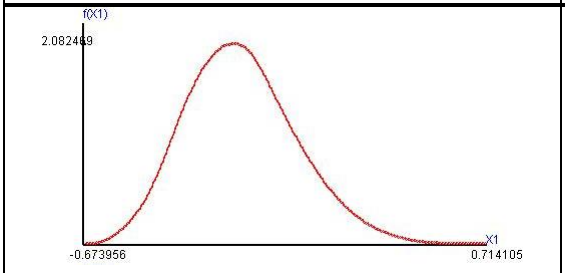
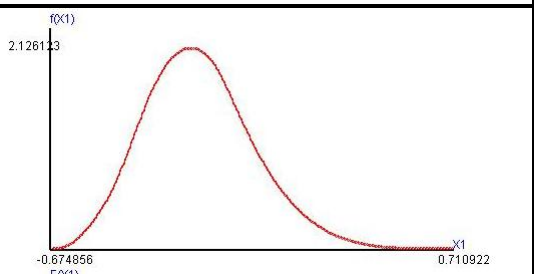
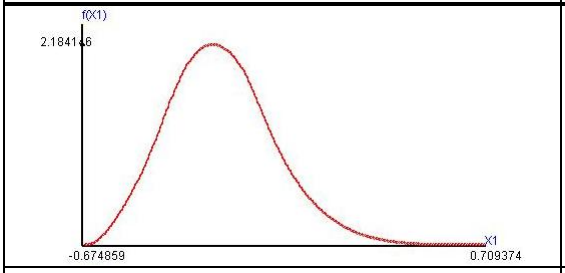
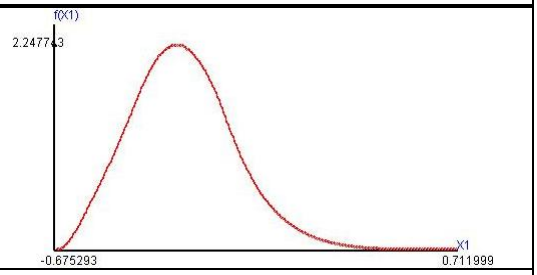
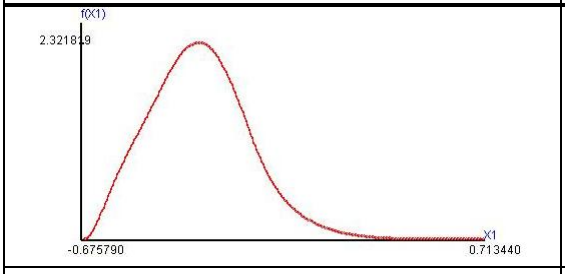
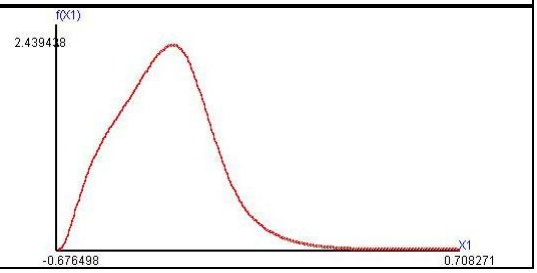
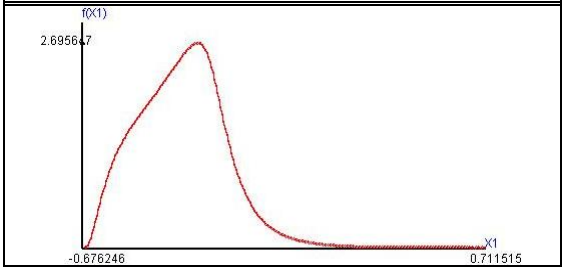
indepedent sample correlation coefficient----------

	X1	X2	X3	X4	X5
X2	0.024028234	1			
X3	0.314646678	0.405194595	1		
X4	0.005269787	0.001539342	-0.131205559	1	
X5	0.182811853	0.017165054	-0.249082423	0.011680009	1
X6	0.043103752	0.309836262	-0.358269997	-0.005317961	0.246722421

T=15,*df*=15-7=8,

$H_0 : \rho = 0$	$H_0 : \rho = 0.1$
	
$H_0 : \rho = 0.2$	$H_0 : \rho = 0.3$
	
$H_0 : \rho = 0.4$	$H_0 : \rho = 0.5$
	
$H_0 : \rho = 0.6$	$H_0 : \rho = 0.7$
	
$H_0 : \rho = 0.8$	$H_0 : \rho = 0.9$
	

The probability distribution of Durbin Watson test will be modified when the autocorrelation coefficient changed.

$H_0 : \rho = -0.1$	$H_0 : \rho = -0.2$
	
$H_0 : \rho = -0.3$	$H_0 : \rho = -0.4$
	
$H_0 : \rho = -0.5$	$H_0 : \rho = -0.6$
	
$H_0 : \rho = -0.7$	$H_0 : \rho = -0.8$
	
$H_0 : \rho = -0.9$	
	

Ceofficeint:

Hypothesis	Average	Variance	Ceofficent of Skewed	Coefficient of Kurtosis
$H_0 : \rho = 0$	-0.03635	0.04155	0.21133	2.75464
$H_0 : \rho = 0.1$	-0.00289	0.04299	0.15934	2.69259
$H_0 : \rho = 0.2$	0.03127	0.04448	0.10492	2.63624
$H_0 : \rho = 0.3$	0.06660	0.04603	0.04662	2.58404
$H_0 : \rho = 0.4$	0.10352	0.04759	-0.01827	2.53666
$H_0 : \rho = 0.5$	0.14236	0.04906	-0.09338	2.49929
$H_0 : \rho = 0.6$	0.18309	0.05018	-0.18247	2.48332
$H_0 : \rho = 0.7$	0.22498	0.05062	-0.28815	2.50586
$H_0 : \rho = 0.8$	0.26627	0.04997	-0.41054	2.58608
$H_0 : \rho = 0.9$	0.30397	0.04799	-0.54683	2.73837
$H_0 : \rho = –0.1$	-0.06949	0.04011	0.26101	2.82416
$H_0 : \rho = –0.2$	-0.10266	0.03864	0.30734	2.90165
$H_0 : \rho = –0.3$	-0.13610	0.03711	0.34830	2.98520
$H_0 : \rho = –0.4$	-0.16998	0.03549	0.38129	3.06972
$H_0 : \rho = –0.5$	-0.20436	0.03375	0.40370	3.14718
$H_0 : \rho = –0.6$	-0.23913	0.03183	0.41348	3.20847
$H_0 : \rho = –0.7$	-0.27401	0.02961	0.40925	3.24774
$H_0 : \rho = –0.8$	-0.30842	0.02676	0.38943	3.27465
$H_0 : \rho = –0.9$	-0.34149	0.02233	0.34910	3.35497

Crictical value:

Hypothesis	$1-\alpha$			
	0.995	0.99	0.975	0.95
$H_0 : \rho = 0$	-0.4988827775	-0.4625633263	-0.4065223647	-0.3561545040
$H_0 : \rho = 0.1$	-0.4794917870	-0.4416429821	-0.3838847121	-0.3317187818
$H_0 : \rho = 0.2$	-0.4601839632	-0.4209879838	-0.3612754288	-0.3068061403
$H_0 : \rho = 0.3$	-0.4408965871	-0.4002594134	-0.3381001589	-0.2809768431
$H_0 : \rho = 0.4$	-0.4212613761	-0.3789568039	-0.3137781191	-0.2538187607
$H_0 : \rho = 0.5$	-0.4009485914	-0.3566435526	-0.2879053060	-0.2250550601
$H_0 : \rho = 0.6$	-0.3795578137	-0.3328208812	-0.2601519910	-0.1945037189
$H_0 : \rho = 0.7$	-0.3567744263	-0.3071861835	-0.2305646169	-0.1624789086
$H_0 : \rho = 0.8$	-0.3324885371	-0.2799056798	-0.1996358124	-0.1296007225
$H_0 : \rho = 0.9$	-0.3071142486	-0.2518154721	-0.1684772052	-0.0969657237
$H_0 : \rho = –0.1$	-0.5181850590	-0.4840446562	-0.4296107207	-0.3805822395
$H_0 : \rho = –0.2$	-0.5375330474	-0.5057976700	-0.4536169292	-0.4056614788
$H_0 : \rho = –0.3$	-0.5566299386	-0.5276992002	-0.4786301683	-0.4317998222
$H_0 : \rho = –0.4$	-0.5750648632	-0.5493564831	-0.5042954202	-0.4593697318
$H_0 : \rho = –0.5$	-0.5925897401	-0.5701699907	-0.5298632296	-0.4880369054
$H_0 : \rho = –0.6$	-0.6085021101	-0.5894895783	-0.5543399768	-0.5165175843
$H_0 : \rho = –0.7$	-0.6221260127	-0.6062949813	-0.5763838729	-0.5431701180
$H_0 : \rho = –0.8$	-0.6325214202	-0.6193885968	-0.5942884407	-0.5656196419
$H_0 : \rho = –0.9$	-0.6381663671	-0.6268411747	-0.6049864343	-0.5795918600

Hypothesis	α			
	0.05	0.025	0.01	0.005
$H_0 : \rho = 0$	0.3164919019	0.3822230623	0.4536171911	0.4991639466
$H_0 : \rho = 0.1$	0.3526217925	0.4159808565	0.4843354511	0.5269766493
$H_0 : \rho = 0.2$	0.3889141140	0.4498443632	0.5148145553	0.5539417174
$H_0 : \rho = 0.3$	0.4257247843	0.4841693592	0.5446166618	0.5797390432
$H_0 : \rho = 0.4$	0.4632160559	0.5184869819	0.5730999049	0.6039731304
$H_0 : \rho = 0.5$	0.5010368483	0.5515563306	0.5995569466	0.6259347863
$H_0 : \rho = 0.6$	0.5372683194	0.5818357343	0.6229358414	0.6449578002
$H_0 : \rho = 0.7$	0.5694257384	0.6076285763	0.6420081193	0.6602635625
$H_0 : \rho = 0.8$	0.5947540970	0.6270080698	0.6557523248	0.6709843134
$H_0 : \rho = 0.9$	0.6108663694	0.6384178282	0.6632641597	0.6766143926
$H_0 : \rho = –0.1$	0.2800865773	0.3479697090	0.4225129072	0.4702088547
$H_0 : \rho = –0.2$	0.2428012225	0.3126850622	0.3904047796	0.4402138400
$H_0 : \rho = –0.3$	0.2041757246	0.2757432835	0.3564529836	0.4086172275

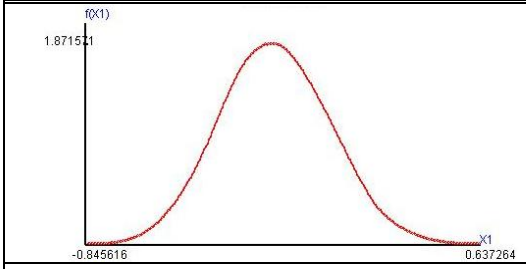
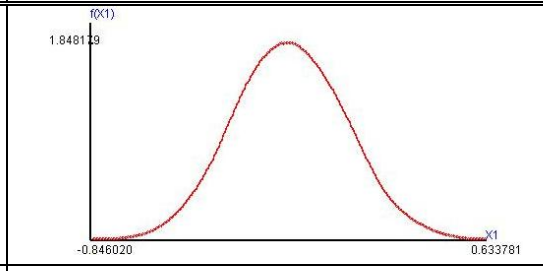
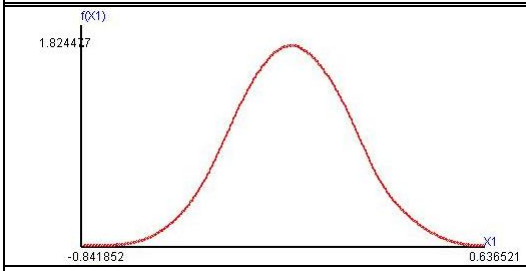
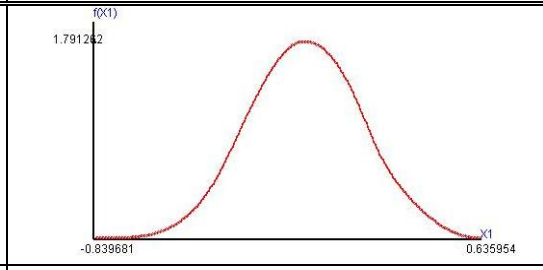
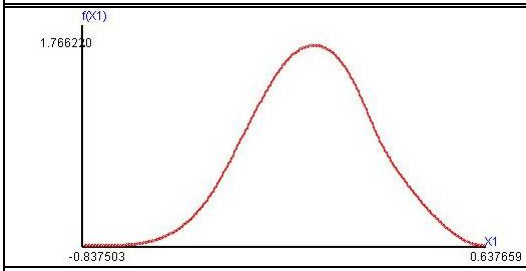
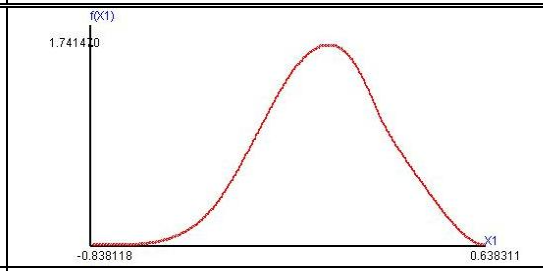
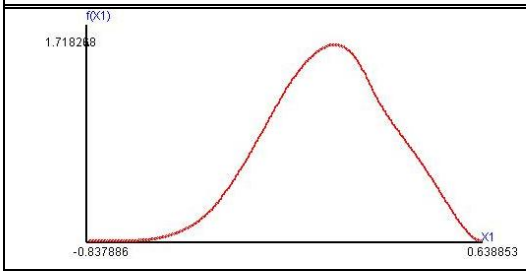
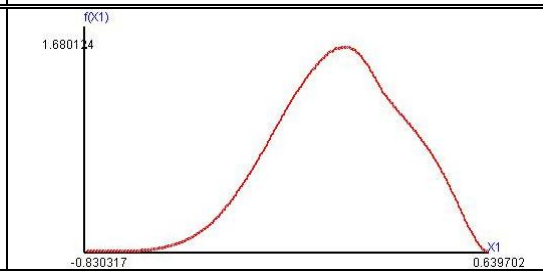
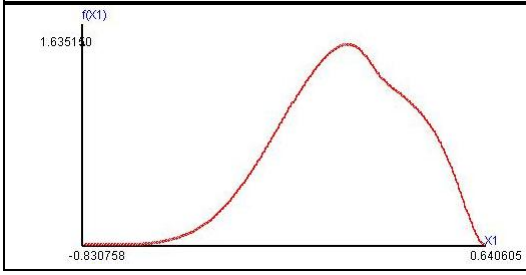
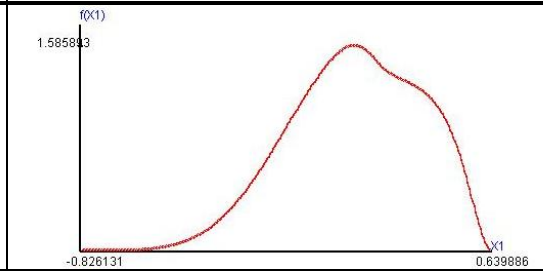
$H_0 : \rho = -0.4$	0.1634474423	0.2362775920	0.3198516742	0.3746206970
$H_0 : \rho = -0.5$	0.1199521912	0.1936966075	0.2798822515	0.3372790468
$H_0 : \rho = -0.6$	0.0730823926	0.1473271638	0.2356720284	0.2956555137
$H_0 : \rho = -0.7$	0.0224856154	0.0959718806	0.1858125779	0.2480296609
$H_0 : \rho = -0.8$	-0.0331161940	0.0375565141	0.1278502525	0.1918422051
$H_0 : \rho = -0.9$	-0.0986046809	-0.0340111814	0.0542664926	0.1198052466

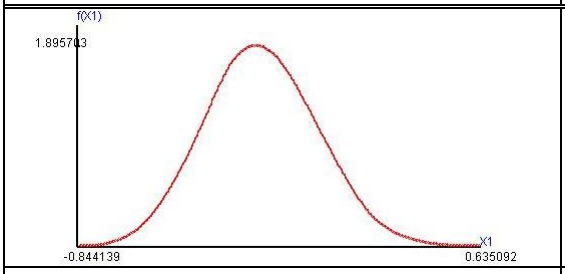
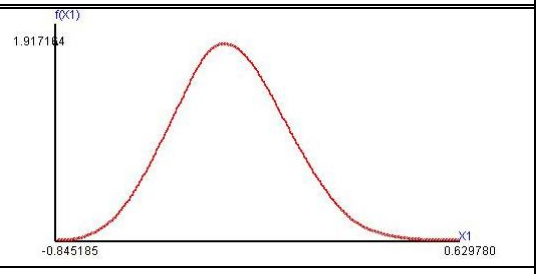
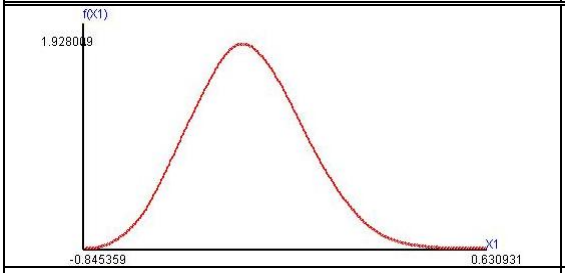
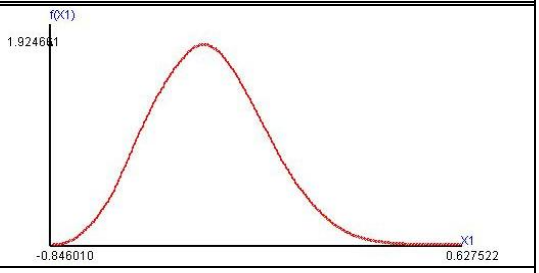
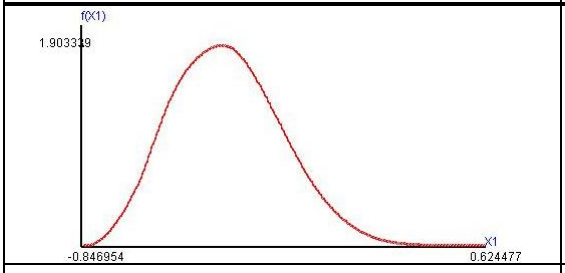
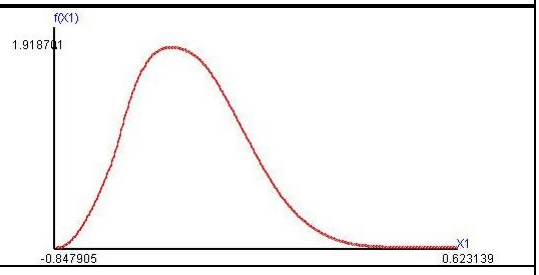
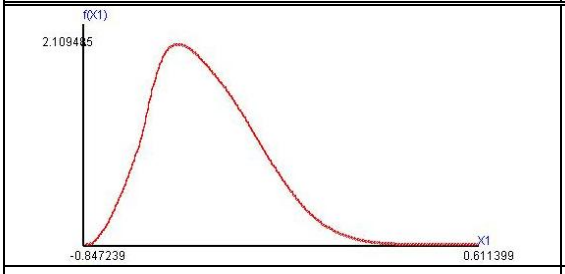
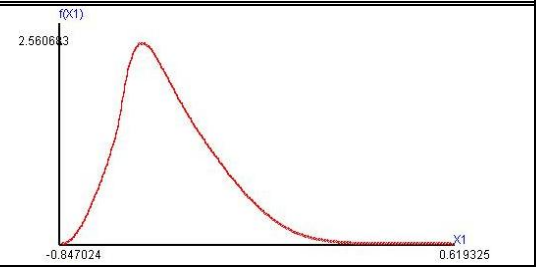
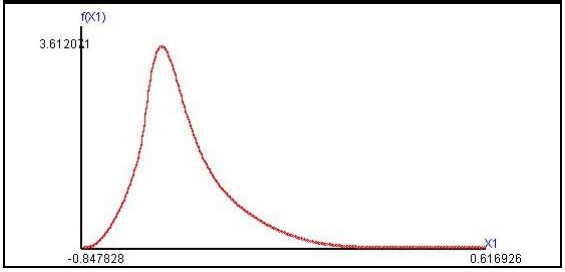
2.1.2)Case 2:

	X1	X2	X3	X4	X5	X6
1 :	1.0342327801,	0.9938968730,	1.0055483431,	0.9972486251,	2.0174772521,	1.0011128268,
2 :	1.9939250244,	2.0050617260,	2.0044291639,	1.9930661719,	3.9985932430,	1.9892018383,
3 :	2.9946498749,	2.9993904712,	2.9862714459,	2.9938224367,	6.0303541935,	3.0053926267,
4 :	3.9879783225,	3.9995636054,	3.9899215859,	4.0061246421,	7.9985945780,	4.0036825174,
5 :	4.9886762254,	5.0123181307,	5.0038138429,	5.0014878150,	10.0058464462,	5.0035526421,
6 :	6.0077623541,	5.9984657026,	5.9823589548,	5.9897260370,	11.9990123697,	6.0070164330,
7 :	6.9986625588,	7.0025867488,	6.9999655244,	6.9759312192,	13.9906223629,	7.0050104001,
8 :	8.0193319154,	8.0100625078,	7.9964579556,	8.0165849229,	16.0063624223,	8.0082168311,
9 :	8.9979656598,	8.9957332920,	8.9939490876,	8.9903687453,	18.0079181999,	8.9820910361,
10 :	10.0120610022,	10.0029708724,	10.0091567574,	9.9907976356,	19.9919782139,	9.9911175111,
11 :	10.9937528012,	10.9866900333,	11.0003603762,	10.9943661350,	21.9969665824,	10.9993986415,
12 :	12.0082464631,	12.0119475244,	12.0046919009,	11.9857603548,	24.0059617883,	12.0070996197,
13 :	12.9930932431,	12.9983892508,	12.9801822530,	13.0089394821,	26.0056412905,	13.0150885144,
14 :	14.0004243955,	13.9881921651,	13.9946459118,	14.0258401477,	27.9945778811,	13.9868505142,
15 :	15.0026946305,	15.0192188278,	15.0092123876,	15.0132537299,	30.0007441110,	15.0016819903,

indepedent sample correlation coefficient----------

	X1	X2	X3	X4	X5
X2	0.999998689	1			
X3	0.999998969	0.999999411	1		
X4	0.999998091	0.999998526	0.999998403	1	
X5	0.999999107	0.999999410	0.999999153	0.999998846	1
X6	0.999998693	0.999999362	0.999998667	0.999998542	0.999999504

$H_0 : \rho = 0$	$H_0 : \rho = 0.1$
	
$H_0 : \rho = 0.2$	$H_0 : \rho = 0.3$
	
$H_0 : \rho = 0.4$	$H_0 : \rho = 0.5$
	
$H_0 : \rho = 0.6$	$H_0 : \rho = 0.7$
	
$H_0 : \rho = 0.8$	$H_0 : \rho = 0.9$
	

$H_0 : \rho = -0.1$	$H_0 : \rho = -0.2$
	
$H_0 : \rho = -0.3$	$H_0 : \rho = -0.4$
	
$H_0 : \rho = -0.5$	$H_0 : \rho = -0.6$
	
$H_0 : \rho = -0.7$	$H_0 : \rho = -0.8$
	
$H_0 : \rho = -0.9$	
	

The probability distribution of Durbin Watson test will be modified when the autocorrelation coefficient changed.

Ceofficeint:

Hypothesis	Average	Variance	Ceofficent of Skewed	Coefficient of Kurtosis
$H_0 : \rho = 0$	-0.13950	0.04349	0.08427	2.82851
$H_0 : \rho = 0.1$	-0.10496	0.04419	0.05493	2.81328
$H_0 : \rho = 0.2$	-0.07082	0.04509	0.02680	2.79110
$H_0 : \rho = 0.3$	-0.03686	0.04621	-0.00219	2.76129
$H_0 : \rho = 0.4$	-0.00291	0.04755	-0.03439	2.72358
$H_0 : \rho = 0.5$	0.03104	0.04909	-0.07241	2.67911
$H_0 : \rho = 0.6$	0.06472	0.05072	-0.11838	2.63162
$H_0 : \rho = 0.7$	0.09725	0.05231	-0.17289	2.58797
$H_0 : \rho = 0.8$	0.12685	0.05367	-0.23319	2.55647
$H_0 : \rho = 0.9$	0.15024	0.05464	-0.28999	2.54203
$H_0 : \rho = –0.1$	-0.17461	0.04295	0.11651	2.83765
$H_0 : \rho = –0.2$	-0.21043	0.04248	0.15320	2.84180
$H_0 : \rho = –0.3$	-0.24701	0.04199	0.19602	2.84271
$H_0 : \rho = –0.4$	-0.28435	0.04138	0.24721	2.84411
$H_0 : \rho = –0.5$	-0.32236	0.04045	0.31044	2.85405
$H_0 : \rho = –0.6$	-0.36096	0.03896	0.39224	2.89096
$H_0 : \rho = –0.7$	-0.40034	0.03644	0.50563	3.00047
$H_0 : \rho = –0.8$	-0.44148	0.03202	0.68135	3.31461
$H_0 : \rho = –0.9$	-0.48753	0.02392	1.01669	4.35778

Crictical value:

Hypothesis	$1-\alpha$			
	0.995	0.99	0.975	0.95
$H_0 : \rho = 0$	-0.6450523625	-0.6035814680	-0.5386947208	-0.4790666987
$H_0 : \rho = 0.1$	-0.6206176254	-0.5772553254	-0.5097858802	-0.4482353494
$H_0 : \rho = 0.2$	-0.5961851917	-0.5514657557	-0.4817413801	-0.4185912252
$H_0 : \rho = 0.3$	-0.5724590484	-0.5264689292	-0.4547449832	-0.3902220794
$H_0 : \rho = 0.4$	-0.5499584648	-0.5025670511	-0.4289136755	-0.3632270192
$H_0 : \rho = 0.5$	-0.5287165397	-0.4800586991	-0.4044972593	-0.3375068047
$H_0 : \rho = 0.6$	-0.5089003415	-0.4591783990	-0.3816062993	-0.3130160978
$H_0 : \rho = 0.7$	-0.4912419466	-0.4399060575	-0.3605309766	-0.2901200812
$H_0 : \rho = 0.8$	-0.4760026609	-0.4235322881	-0.3422609443	-0.2697289837
$H_0 : \rho = 0.9$	-0.4648755851	-0.4113658920	-0.3283344172	-0.2539846206
$H_0 : \rho = –0.1$	-0.6690430968	-0.6300635708	-0.5679431562	-0.5106044220
$H_0 : \rho = –0.2$	-0.6918686029	-0.6560970213	-0.5971163031	-0.5424509505
$H_0 : \rho = –0.3$	-0.7132612000	-0.6807688390	-0.6258291417	-0.5738431451
$H_0 : \rho = –0.4$	-0.7325765822	-0.7035838170	-0.6533109574	-0.6041756797
$H_0 : \rho = –0.5$	-0.7494942402	-0.7238454068	-0.6784531472	-0.6327395453
$H_0 : \rho = –0.6$	-0.7634589098	-0.7407329740	-0.7000357156	-0.6583073907
$H_0 : \rho = –0.7$	-0.7735843607	-0.7532550393	-0.7166902117	-0.6788749756
$H_0 : \rho = –0.8$	-0.7785551326	-0.7599458674	-0.7265237001	-0.6920359282
$H_0 : \rho = –0.9$	-0.7759667000	-0.7574865638	-0.7252227925	-0.6929406765

Hypothesis	α			
	0.05	0.025	0.01	0.005
$H_0 : \rho = 0$	0.2080840812	0.2762354150	0.3544786670	0.4036379042
$H_0 : \rho = 0.1$	0.2446847685	0.3132460391	0.3882693026	0.4338646699
$H_0 : \rho = 0.2$	0.2830450373	0.3503788895	0.4208929179	0.4625988333
$H_0 : \rho = 0.3$	0.3223280178	0.3868135169	0.4519254664	0.4894467644
$H_0 : \rho = 0.4$	0.3616008690	0.4220013602	0.4808393561	0.5139158954
$H_0 : \rho = 0.5$	0.3996316447	0.4548655167	0.5070561965	0.5355295842
$H_0 : \rho = 0.6$	0.4349853155	0.4843971976	0.5297125821	0.5540031995
$H_0 : \rho = 0.7$	0.4659606225	0.5093567613	0.5483047115	0.5689640857
$H_0 : \rho = 0.8$	0.4908614245	0.5288227814	0.5623886551	0.5800781665
$H_0 : \rho = 0.9$	0.5080149384	0.5418512719	0.5715841712	0.5871952311
$H_0 : \rho = –0.1$	0.1729219153	0.2398775956	0.3199001736	0.3720320075
$H_0 : \rho = –0.2$	0.1381232105	0.2045639478	0.2846325492	0.3391216993

$H_0 : \rho = -0.3$	0.1025512101	0.1697823073	0.2491820629	0.3048576802
$H_0 : \rho = -0.4$	0.0656210347	0.1343358076	0.2136210685	0.2695567642
$H_0 : \rho = -0.5$	0.0268882098	0.0969688046	0.1774443163	0.2327569307
$H_0 : \rho = -0.6$	-0.0138588622	0.0570369180	0.1390365846	0.1945615616
$H_0 : \rho = -0.7$	-0.0574160253	0.0133902378	0.0962942389	0.1529261203
$H_0 : \rho = -0.8$	-0.1075679426	-0.0364292954	0.0468293759	0.1043991036
$H_0 : \rho = -0.9$	-0.1811763086	-0.1042482233	-0.0178076101	0.0411398041