Question 1

Source	df	SS	MS	F	p		SS
Regression	2	65	32.5	4.365672	0.02846	SSR(x1)	39
Error	18	134	7.444444			SSR(x2)	18
Total	20	199					

Contribution of Variable x1

Source	df	SS	MS	F	p		
Regression	2	65				rSq(1|2)	0.259669
SSR(x2)	1	18					
SSR(x1|x2)	1	47	47	6.313433	0.022		
Error	18	134	7.444444				
Total	20	199					

Numerator df
Denominator df

Contribution of Variable x2

Source	df	SS	MS	F	p		
Regression	2	65				rSq(2|1)	0.1625
SSR(x1)	1	39					
SSR(x2|x1)	1	26	26	3.492537	0.078		
Error	18	134	7.444444				
Total	20	199					

Question 2

Source	df	SS	MS	F		SSR(x1)	25
Regression	2	29	14.5	1.178862		SSR(x2)	20
Error	10	123	12.3				
Total	12	152					

Contribution of Variable x1

Source	df	SS	MS	F	p		
Regression	2	29				rSq(1|2)	0.068182
SSR(x2)	1	20					
SSR(x1|x2)	1	9	9	0.731707	0.4124		
Error	10	123	12.3				
Total	12	152					

Source	df	SS	MS	F	p		
Regression	2	29				rSq(2|1)	0.031496

Source	df	SS	MS	F	p		
SSR(x1)	1	25					
SSR(x2|x1)	1	4	4	0.325203	0.5811		
Error	10	123	12.3				
Total	12	152					

Question 3

Source	df	SS	MS	F	p		
Regression	2	25.4624	12.7312	17.00885	0.000	SSR(x1)	20.5611
Error	47	35.1797	0.748504			SSR(x2)	10.5195
Total	49	60.6421					

Contribution of Variable x1 (alcohol %)

Source	df	SS	MS	F	p		
Regression	2	25.4624				rSq(x1|x2)	0.298127
SSR(x2)	1	10.5195					
SSR(x1|x2)	1	14.9429	14.9429	19.96368	0.000		
Error	47	35.1797	0.748504				
Total	49	60.6421					

Contribution of Variable x2 (chlorides)

Source	df	SS	MS	F	p		
Regression	2	25.4624				rSq(x2|x1)	0.122285
SSR(x1)	1	20.5611					
SSR(x2|x1)	1	4.9013	4.9013	6.548126	0.01378		
Error	47	35.1797	0.748504				
Total	49	60.6421					

Question 4

Source	df	SS					
Regression	2	27,645.84				SSR(x1)	519.1073
Error	23	28,753.36				SSR(x2)	20,661.44
Total	25	56,399.20					

Contribution of Variable x1 (total staff present)

Source	df	SS	MS	F	p		
Regression	2	27,645.84				rSq(x1|x2)	0.195435
SSR(x2)	1	20,661.44					
SSR(x1|x2)	1	6,984.40	6984.4	5.586867	0.02692		
Error	23	28,753.36	1250.146				
Total	25	56,399.20					

Contribution of Variable x2 (remote hours)

Source	df	SS	MS	F	p		
Regression	2	27,645.84				rSq(x2|x1)	0.485445

SSR(x1)	1	519.11			
SSR(x2|x1)	1	27,126.73	27126.73	21.69885	0.000
Error	23	28,753.36	1250.146		
Total	25	56,399.20			

Question 5

	Revenue	Efficiency		df=n-k-1		
Coefficient	0.6616391	0.842452		95-2-1		x1 = revenu
StErr	0.319153	0.077377		92		x2 = efficier
tCrit	1.986	1.986		.95 CI --> p = 0.05		
MarErr	0.63383786	0.153671		Two Tail		
LCL	0.02780124	0.688781		tcrit=1.986		
UCL	1.29547696	0.996123				

Question 6

	Alcohol	Chlorides		df=60-2-1
Coefficient	0.33489	-9.76247		df = 57
StErr	0.11544	3.57385		p=0.05
tCrit	2.002	2.002		tcrit=2.002
MarErr	0.23111088	7.154848		
LCL	0.10377912	-16.9173		
UCL	0.56600088	-2.60762		

Question 7

	Area	Age		df=36-2-1
Coefficient	452.57311	-2.71713		df=33
StErr	118.11589	0.60836		p=0.05
tCrit	2.035	2.035		2.035
MarErr	240.365836	1.238013		
LCL	212.207274	-3.95514		
UCL	692.938946	-1.47912		

Source	df	SS	MS	F	p			
Regression	2	6.7261	3.36305	43.79437	0.02846		SSR(x1)	3.8399
Error	196	15.0512	0.076792				SSR(x2)	3.7015
Total	198	21.7773						

Source	df	SS	MS	F	p		rSq(1|2)	0.167329
Regression	2	6.7261						
SSR(x2)	1	3.7015						
SSR(x1|x2)	1	3.0246	3.0246	39.387	0.022			
Error	196	15.0512	0.076792					
Total	198	21.7773						

Numerator df
Denominator df

Source	df	SS	MS	F	p		rSq(2|1)	0.160904
Regression	2	6.7261						
SSR(x1)	1	3.8399						
SSR(x2|x1)	1	2.8862	2.8862	37.58472	0.022			
Error	196	15.0512	0.076792					
Total	198	21.7773						

Numerator df
Denominator df