Calculator for the Critical Range

INPUT AREA

Basic Input

	beta 1	beta 12
coefficient	18.56	-0.57
var-cov		
beta 1	28.51560	
beta 12	0.06250	-1.32521

# of predictors	3
# of samples	100
confidence level	0.05
mid-point of critical range	24
L	100

Hypothetical Decision Variable

Solution	97.724638

OUTPUT AREA

r-value

Objective value	5.1772745

Critical Range

Lower bound	18.822726
Upper bound	29.177274

Calculator for p-value

Critial t-value	1.9850
B(LB)	var(B(LB))
18.82272555	0.7708743
B(UB)	var(B(UP))
29.17727445	4.3905984
beta 12	SE
-0.57	0.2871559
t-value	p-value
-1.984984347	0.050000

Code

B22	=($B$13-$B$17)^2
B25	=$B$12-$B$21

	A	B	C	D	E	F
43	B26	=$B$12+$B$21				
44	B29	=T.INV.2T($B$11,$B$10-$B$9-1)				
45	A31	=$B$24				
46	B31	=$B$8+2*$C$9*$A$31+$B$9*$A$31^2				
47	A33	=$B$25				
48	B33	=$B$8+2*$C$9*$A$33+$B$9*$A$33^2				
49	A35	=$C$5				
50	B35	=($B$30^(1/2)+$B$32^(1/2))/($A$32-$A$30)				
51	A37	=$A$34/$B$34				
52	B37	=T.DIST.2T(ABS($A$36),$B$10-$B$9-1)				
53						
54	**The Step for Excel Solver**					
55	1. Put an initial value such as 10 into B18.					
56	2. Set B22 as the target cell.					
57	3. Set B18 as the change cell.					
58	4. Restrict that B37=0.05.					
59	5. Minimze the target cell.					