

## Ordering Simulation Analysis: Computer of Tomorrow Example

Using simulation with data table to examine the effect of varying reorder point.

	A	B	C	D	E	F	G
4							
5			reorder point		28		
6							
7			order quantity		50		
8							
9			Possible reorder points				
10		0.936508	28	30	32	34	36
11		1	0.965909	0.993506	0.959302	0.968085	0.952663
12		2	0.962567	0.928962	0.973262	0.97561	0.935644
13		3	0.855615	0.970874	0.951613	0.943503	0.953608
14		4	0.935829	0.895833	0.989418	0.957831	0.957055

Procedure for using data table:

1. Select entire range – in this case from B10 to G210.
2. For row input cell enter cell E5.
3. For column input cell enter any blank cell on spreadsheet.
4. Click on OK.

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4									
5			reorder point		28				
6									
7			order quantity		50				
8									
9			Possible reorder points						
10		0.936508	28	30	32	34	36		
11		1	0.965909	0.993506	0.959302	0.968085	0.952663		
12		2	0.962567	0.928962	0.973262	0.97561	0.935644		

**Table** [?] [X]

Row input cell:

Column input cell:

OK Cancel

	A	B	C	D	E	F	G	H	I	J
34	29	25	0	6	6	19	69	0	0	0
35	30	19	0	4	4	15	65	0	0	0
36		<b>service level</b>			0.918782					
37										
38	E36. =SUM(E6:E34)/SUM(D6:D35)									
39										

Procedure for analysis:

1. First you must “freeze” data values. You do this by highlighting all relevant cells, then COPY, then PASTE SPECIAL, and finally select VALUES.
2. Go to Tools | Data Analysis | Histogram (select chart output & cumulative).
3. Go to Tools | Data Analysis | Descriptive to obtain summary statistics.
4. Use percentile function (range, percent) to obtain representative values for comparison.

Descriptive Statistics Output:

28

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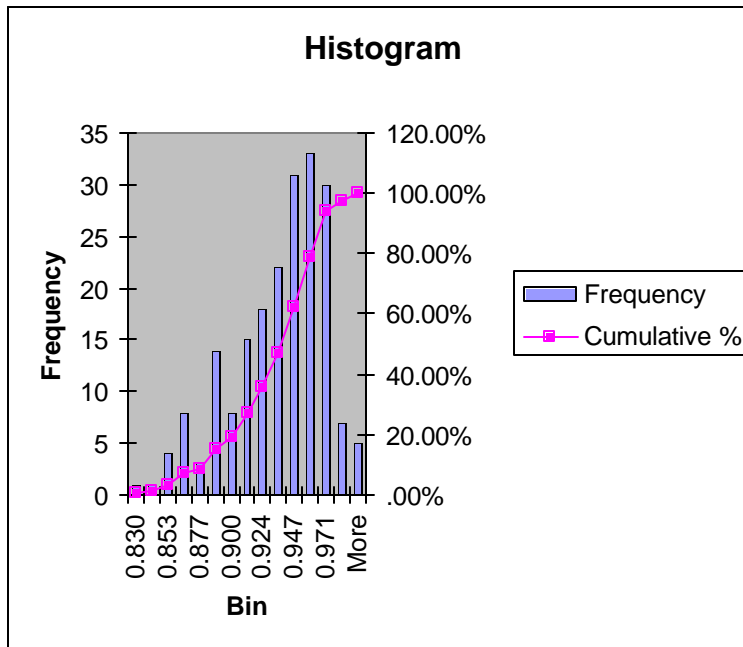
Mean	0.929951679
Standard Error	0.00243893
Median	0.937303459
Mode	0.947368421
Standard Deviation	0.03449168
Sample Variance	0.001189676
Kurtosis	-0.016403092
Skewness	-0.728906076
Range	0.163975904
Minimum	0.83
Maximum	0.993975904
Sum	185.9903357
Count	200
Confidence Level(95.0%)	0.004809466

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50th percentile	0.9373
75th percentile	0.9551
80th percentile	0.9604
90th percentile	0.9670
95th percentile	0.9767
99th percentile	0.9874

Histogram Output:

Bin	Frequency	Cumulative %
0.830	1	.50%
0.842	1	1.00%
0.853	4	3.00%
0.865	8	7.00%
0.877	3	8.50%
0.889	14	15.50%
0.900	8	19.50%
0.912	15	27.00%
0.924	18	36.00%
0.935	22	47.00%
0.947	31	62.50%
0.959	33	79.00%
0.971	30	94.00%
0.982	7	97.50%
More	5	100.00%



Final Step: Determine basis for analysis and select best option.