

overbook

	A	B	C	D	E	F
1	<b>Overbooking Model</b>					
2		<b>First Class</b>	<b>Economy</b>		<b>OL_First</b>	<b>OL_Econ</b>
3	<b>Ticket Price</b>	\$ 600	\$ 300		0	0
4	<b>Penalty</b>	\$ 500	\$ 200		0	5
5	<b>Seats</b>	50	190		0	10
6	<b>Expected Demand</b>	50	200		0	15
7	<b>Probability of Coming</b>	0.93	0.96		0	20
8					0	25
9	<b>Overbooking</b>	0	0		5	0
10					5	5
11	<b>Demand</b>	50	200		5	10
12	<b>Tickets Sold</b>	50	190		5	15
13	<b>Passengers Arrived</b>	47	182		5	20
14	<b>Passengers Seated</b>	47	182		5	25
15	<b>Passengers Not Seated</b>	0	0		10	0
16	<b>Revenue from tickets</b>	\$ 28,200	\$ 57,000		10	5
17	<b>Penalty for Overbooking</b>	\$ -	\$ -		10	10
18	<b>Profit</b>	\$ 28,200	\$ 57,000		10	15
19					10	20
20	<b>Total Profit</b>				10	25
21	<b>\$ 85,200</b>					

Values

overbook


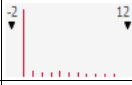

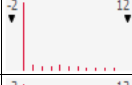


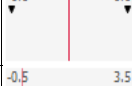



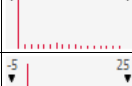

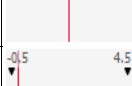











	A	B	C	D	E	F
1	<b>Overbooking Model</b>					
2		<b>First Class</b>	<b>Economy</b>		<b>_FiL_Ec</b>	
3	<b>Ticket Price</b>	600	300		0	0
4	<b>Penalty</b>	500	200		0	5
5	<b>Seats</b>	50	190		0	10
6	<b>Expected Demand</b>	50	200		0	15
7	<b>Probability of Coming</b>	0.93	0.96		0	20
8					0	25
9	<b>Overbooking</b>	=RiskSimtable(E3:E20)	=RiskSimtable(F3:F20)		5	0
10					5	5
11	<b>Demand</b>	=RiskPoisson(B6)	=RiskPoisson(C6)		5	10
12	<b>Tickets Sold</b>	=MIN(B11,B5+B9)	=MIN(C11,C5+C9)		5	15
13	<b>Passengers Arrived</b>	=RiskBinomial(B12,B7)	=RiskBinomial(C12,C7)		5	20
14	<b>Passengers Seated</b>	=MIN(B5,B13)	=MIN(B5+C5-B14,C13)		5	25
15	<b>Passengers Not Seated</b>	=RiskOutput()+B13-B14	=RiskOutput()+C13-C14		10	0
16	<b>Revenue from tickets</b>	=B3*B14	=C3*C12		10	5
17	<b>Penalty for Overbook</b>	=B15*B4	=C15*(C3+C4)		10	10
18	<b>Profit</b>	=B16-B17	=C16-C17		10	15
19					10	20
20	<b>Total Profit</b>				10	25
21	=RiskOutput()+B18+C					

# @RISK Output Results

Performed By: Levin, Yuri G

Date: March-03-13 1:46:44 PM

Name	Cell	Sim#	Graph	Min	Mean	Max	5%	95%	Errors
Total Profit	A21	1		\$ 68,100	\$ 82,745	\$ 87,000	\$ 77,100	\$ 86,400	0
Total Profit	A21	2		\$ 68,100	\$ 83,789	\$ 88,500	\$ 77,700	\$ 87,300	0
Total Profit	A21	3		\$ 68,100	\$ 84,539	\$ 90,000	\$ 78,000	\$ 88,800	0
Total Profit	A21	4		\$ 68,100	\$ 84,771	\$ 90,900	\$ 78,000	\$ 88,900	0
Total Profit	A21	5		\$ 68,100	\$ 84,683	\$ 91,100	\$ 78,000	\$ 88,800	0
Total Profit	A21	6		\$ 68,100	\$ 84,549	\$ 91,100	\$ 78,000	\$ 88,600	0
Total Profit	A21	7		\$ 68,100	\$ 83,263	\$ 87,000	\$ 77,400	\$ 87,000	0
Total Profit	A21	8		\$ 68,100	\$ 84,293	\$ 88,500	\$ 78,000	\$ 88,200	0
Total Profit	A21	9		\$ 68,100	\$ 84,900	\$ 90,000	\$ 78,300	\$ 89,100	0
Total Profit	A21	10		\$ 68,100	\$ 85,010	\$ 91,500	\$ 78,300	\$ 89,100	0
Total Profit	A21	11		\$ 68,100	\$ 84,903	\$ 91,500	\$ 78,300	\$ 88,900	0
Total Profit	A21	12		\$ 68,100	\$ 84,769	\$ 91,500	\$ 78,300	\$ 88,800	0
Total Profit	A21	13		\$ 68,100	\$ 82,981	\$ 87,000	\$ 77,400	\$ 86,500	0
Total Profit	A21	14		\$ 68,100	\$ 84,010	\$ 88,500	\$ 77,700	\$ 88,000	0
Total Profit	A21	15		\$ 68,100	\$ 84,608	\$ 90,000	\$ 78,000	\$ 89,000	0
Total Profit	A21	16		\$ 68,100	\$ 84,713	\$ 91,500	\$ 78,000	\$ 88,800	0
Total Profit	A21	17		\$ 68,100	\$ 84,605	\$ 91,500	\$ 78,000	\$ 88,700	0
Total Profit	A21	18		\$ 68,100	\$ 84,471	\$ 91,500	\$ 78,000	\$ 88,500	0
Passengers Not Seated / First Class	B15	1		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	2		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	3		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	4		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	5		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	6		0	0	0	0	0	0
Passengers Not Seated / First Class	B15	7		0	0.432	5	0	3	0
Passengers Not Seated / First Class	B15	8		0	0.432	5	0	3	0
Passengers Not Seated / First Class	B15	9		0	0.432	5	0	3	0
Passengers Not Seated / First Class	B15	10		0	0.432	5	0	3	0
Passengers Not Seated / First Class	B15	11		0	0.432	5	0	3	0
Passengers Not Seated / First Class	B15	12		0	0.432	5	0	3	0

Passengers Not Seated / First Class	B15	13		0	1.066667	10	0	6	0
Passengers Not Seated / First Class	B15	14		0	1.066667	10	0	6	0
Passengers Not Seated / First Class	B15	15		0	1.066667	10	0	6	0
Passengers Not Seated / First Class	B15	16		0	1.066667	10	0	6	0
Passengers Not Seated / First Class	B15	17		0	1.066667	10	0	6	0
Passengers Not Seated / First Class	B15	18		0	1.066667	10	0	6	0
Passengers Not Seated / Economy	C15	1		0	0	0	0	0	0
Passengers Not Seated / Economy	C15	2		0	0.00766667	3	0	0	0
Passengers Not Seated / Economy	C15	3		0	0.2036667	7	0	2	0
Passengers Not Seated / Economy	C15	4		0	1.016667	12	0	6	0
Passengers Not Seated / Economy	C15	5		0	2.081	16	0	10	0
Passengers Not Seated / Economy	C15	6		0	2.913333	21	0	14	0
Passengers Not Seated / Economy	C15	7		0	0	0	0	0	0
Passengers Not Seated / Economy	C15	8		0	0.03433333	4	0	0	0
Passengers Not Seated / Economy	C15	9		0	0.5163333	8	0	4	0
Passengers Not Seated / Economy	C15	10		0	1.573333	13	0	8	0
Passengers Not Seated / Economy	C15	11		0	2.675333	18	0	12	0
Passengers Not Seated / Economy	C15	12		0	3.509333	23	0	16	0
Passengers Not Seated / Economy	C15	13		0	0	0	0	0	0
Passengers Not Seated / Economy	C15	14		0	0.036	4	0	0	0
Passengers Not Seated / Economy	C15	15		0	0.537	9	0	4	0
Passengers Not Seated / Economy	C15	16		0	1.604667	14	0	8	0
Passengers Not Seated / Economy	C15	17		0	2.707333	18	0	12	0
Passengers Not Seated / Economy	C15	18		0	3.541333	23	0	16	0