Computing assignment 2

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Problem 1

	1	2	3	4	5
True DLT probability	0.017	0.043	0.100	0.220	0.410
Selection probability	0.071	0.188	0.339	0.321	0.077
Avg number of patients treated	3.165	3.189	2.999	2.310	1.093
Avg number of patients with DLT	0.061	0.148	0.307	0.497	0.445

Problem 2

Table 2: Performance metrics for 3+3 design when true DLT rates are p=0.10, 0.22, 0.41, 0.64, 0.81

	1	2	3	4	5
True DLT probability	0.100	0.220	0.410	0.640	0.810
Selection probability	0.432	0.364	0.088	0.006	0.000
Avg number of patients treated	3.719	2.808	1.237	0.233	0.015
Avg number of patients with DLT	0.411	0.622	0.511	0.149	0.013

Table 3: Performance metrics for 3+3 design when true DLT rates are p=0.043, 0.10, 0.22, 0.41, 0.64

	1	2	3	4	5
True DLT probability	0.043	0.100	0.220	0.410	0.640
Selection probability	0.182	0.370	0.352	0.075	0.002
Avg number of patients treated	3.357	3.181	2.548	1.168	0.192
Avg number of patients with DLT	0.146	0.302	0.561	0.507	0.123

Table 4: Performance metrics for 3+3 design when true DLT rates are p=0.007, 0.017, 0.043, 0.10, 0.22

	1	2	3	4	5
True DLT probability	0.007	0.017	0.043	0.100	0.220
Selection probability	0.025	0.047	0.194	0.353	0.381
Avg number of patients treated	3.063	3.042	3.143	3.059	2.373
Avg number of patients with DLT	0.021	0.042	0.125	0.334	0.543

Table 5: Performance metrics for 3+3 design when true DLT rates are p=0.003, 0.007, 0.017, 0.043, 0.10

	1	2	3	4	5
True DLT probability	0.003	0.007	0.017	0.043	0.100
Selection probability	0.007	0.019	0.065	0.172	0.737
Avg number of patients treated	3.021	3.027	3.083	3.064	3.143
Avg number of patients with DLT	0.007	0.016	0.055	0.122	0.353