

Homework For Lecture 10

1) Exact PD(20, 40, 19/20);

→ prob. winning: 0.1190277811

→ Expected duration: 304.777

Using EstPD(20, 40, 19/40, K);

i. K = 100

→ prob. winning: 0.11

→ expected duration: 292.06

ii. K = 1000

→ " : 0.131

→ " : 308.3

iii. K = 5000

→ " : 0.1234

→ " : 307.1728

i. gives best estimate for prob. winning, iii. gives best est. for duration

→ we got lucky with K=100, but for obtaining duration, we can always expect to get better results in $>K$ since large K averages out.

2.

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> plot([seq(ForPD(n, 100, p)[1], n in [10, 20, 30, 40, 50]), p = 0.45..0.5);
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