

MTH 210: Lab 3

P 1. Use the Acceptance–Rejection method to generate samples from $\text{Binomial}(n, p)$ setting Geometric as the proposal distribution.

- (1) For $(n, p) = (10, 0.3)$ use $\text{Geometric}(p)$ as the proposal.
- (2) Estimate the value of c .
- (3) For $(n, p) = (100, 0.3)$ use $\text{Geometric}(p^*)$ as the proposal with appropriate choice of p^* .
- (4) Estimate the value of c and compare it with the value of c when the proposal is set as $\text{Geometric}(p)$.