


ST407 Monte Carlo Methods: Practical 3

Importance Sampling

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- ▶ Worksheet: `warwick.ac.uk/st407/resources/prac3q.pdf`¹

¹Be careful copying code from the PDF.

The ' ' in the document are not the same as a ' character.



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Question 1c: Exemplar Rejection Sampler

```
rejection.beta <- function(n=1000, a=10, b=3) {  
  xs <- c()  
  count <- 0  
  for(i in 1:n) {  
    U <- 2; X <- 0  
    while(U > dbeta(X, a, b) / 3.585) {  
      X <- runif(1); U <- runif(1)  
      count <- count + 1  
    }  
    xs[i] <- X  
  }  
  return(xs)  
}
```