Q2 - Convolution

January 9, 2022

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Definition Let $X_1, X_2, \ldots, X_n$ be independent and identically distributed with distribution X. The sum $S = X_1 + X_2 + \cdots + X_n$ is called the n-fold convolution of X.

[1]:
```
m <- 1000000
x <- numeric(m)

for (i in 1:m) {
    u <- runif(2)
    x[i] <- u[1] + u[2]
}

quantile(x, 0.05)
```

5\%: 0.315667575900443