

```
s1 = c(0, 1)
s2 = c(0, 1, 2)
passengers = function() {
  people = 0
  for (j in 1:10) {
    if (people != 0) {
      for (j in 1:people){
        x = sample(s1, size = 1, prob = c(0.8, 0.2))
        people = people - x
      }
      x = sample(s2, size = 1, prob = c(0.5, 0.4, 0.1))
      people = people + x
    } else {
      x = sample(s2, size = 1, prob = c(0.5, 0.4, 0.1))
      people = people + x
    }
  }
  return(people)
}

nsimulations = 100000
simulatedData = replicate(nsimulations, passengers())

checkEvent = function(data) {
  return(data == 0)
}

total = sum(checkEvent(simulatedData))
prob = (total / nsimulations) * 100
prob
```

```
## [1] 5.293
```