

Mathematical Ludo Example 1

Ananda Biswas

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```
# n = as.numeric(readline(prompt = "Enter the number of times you want to play = "))
n <- as.integer(params$number_of_times_you_want_to_play)
```

```
i = 1

numbers <- c()

while(i <= n){
  numbers[i] = floor(runif(n = 1, min = 1, max = 5))

  i = i + 1
}
```

```
x <- c(0)
y <- c(0)

i = 2

while (i <= n+1)
{
  if(numbers[i-1] == 1)
  {
    x[i] <- ( (0.8 * x[i-1]) + 0.1 )
    y[i] <- ( (0.8 * y[i-1]) + 0.04 )
  }
  else if(numbers[i-1] == 2)
  {
    x[i] <- ( (0.5 * x[i-1]) + 0.25 )
    y[i] <- ( (0.5 * y[i-1]) + 0.4 )
  }
  else if(numbers[i-1] == 3)
  {
    x[i] <- ( (0.355 * (x[i-1] - y[i-1])) + 0.266 )
    y[i] <- ( (0.355 * (x[i-1] + y[i-1])) + 0.078 )
  }
  else if(numbers[i-1] == 4)
  {
    x[i] <- ( (0.355 * (x[i-1] + y[i-1])) + 0.378 )
    y[i] <- ( (0.355 * (y[i-1] - x[i-1])) + 0.434 )
  }

  i = i + 1
}
```

```
plot(x, y,  
     xlab = "abscissas",  
     ylab = "ordinates",  
     main = "Mathematical Ludo Example 1",  
     pch = 19,  
     cex = 0.5)
```

