Probability - Doubles wth 2 dice

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July 4, 2016

Khan Academy Video – Die Rolling Probability

Probability-Die Rolling "Doubles"

```
library(data.table)
die_1 <- data.table(face = c(1:6))
die_2 <- data.table(face = c(1:6))
```

Probability of getting doubles with roll of two dice

Total possible outcomes = 6 * 6 = 36

P(doubles) = Doubles Events/Total Possile Events = 6/36 = 0.1667 = 16.67 %

```
Total_Poss_Outcomes <- 6 * 6
options(digits = 3)
P_doubles <- 6/Total_Poss_Outcomes
```

Simulate throwing 2 dice 10,000 times

```
n <- 10000
# throw_1 <- data.table(face = sample(die_1$face, n, replace=TRUE))
throw_1 <- data.table(face = sample(die_1[,face], n, replace=TRUE))
throw_2 <- data.table(face = sample(die_2$face, n, replace=TRUE))
Doubles <- throw_1 == throw_2
Sum_Doubles <- sum(Doubles)
P_Doubles <- (Sum_Doubles / n) * 100
paste("Probability of throwing doubles with 2 dice =",P_Doubles,"%")
```

```
## [1] "Probability of throwing doubles with 2 dice = 16.58 %"
```