L02 统计学导论B-实验课02

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## 2.1 变量类型

* 逻辑型 (logical)：即对于“对(True)”或“错(False)”的表述。仅有 TRUE （可简写为 T） 和 FALSE （可简写为 F）两类。
* # l1,l2,l3 均为逻辑型变量  
  l1 <- TRUE  
  l2 <- FALSE  
  l3 <- T # 等价于l1  
  l4 <- F # 等价于l2  
    
  paste("l1 = ", l1, ", l1 is ", class(l1))
* ## [1] "l1 = TRUE , l1 is logical"
* paste("l2 = ", l2, ", l2 is ", class(l2))
* ## [1] "l2 = FALSE , l2 is logical"
* paste("l3 = ", l3, ", l3 is ", class(l3))
* ## [1] "l3 = TRUE , l3 is logical"
* paste("l4 = ", l4, ", l4 is ", class(l4))
* ## [1] "l4 = FALSE , l4 is logical"
* 数值型 (numeric)：例如人的身高，体重，学生的成绩。我们可以用一个数值来表述这些性质。
* 字符型 (character)：例如人的性别 (gender)，姓名。一般我们使用一串字符来表示这些性质，字符型变量两边由 " 或 ' 包裹。

# n1, n2, n3, n4 均为数值型变量。具体而言：n1 为整型；其余均为浮点型  
n1 <- 3  
n2 <- 1/3  
n3 <- 0.33333  
n4 <- 3.3333e-1  
  
paste("n1 = ", n1,", n1 is the ", class(n1))

## [1] "n1 = 3 , n1 is the numeric"

paste("n2 = ", n2,", n2 is the ", class(n2))

## [1] "n2 = 0.333333333333333 , n2 is the numeric"

paste("n3 = ", n3,", n3 is the ", class(n3))

## [1] "n3 = 0.33333 , n3 is the numeric"

paste("n4 = ", n4,", n4 is the ", class(n4))

## [1] "n4 = 0.33333 , n4 is the numeric"

## 2.2 数据结构

1. **向量** (vector)

v1 = c(1,2,3)   
v2 = c('a','b','c')  
  
paste("v1 = ", v1,", v1 is the ", class(v1))

## [1] "v1 = 1 , v1 is the numeric" "v1 = 2 , v1 is the numeric"  
## [3] "v1 = 3 , v1 is the numeric"

paste("v2 = ", v2,", v2 is the ", class(v2))

## [1] "v2 = a , v2 is the character" "v2 = b , v2 is the character"  
## [3] "v2 = c , v2 is the character"

若 服从正态分布 (normal distribution)，其概率密度函数 为：