Lab-1

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1. Use and show R code to find the square root of 63,504.

sqrt(63504)

## [1] 252

1. Use and show R code to log10(45000)

log10(45000)

## [1] 4.653213

1. Use and show R code to evaluate ln(23.05)

log(23.05)

## [1] 3.137666

1. Use and show R code to write all integers from 15 to 1 in decreasing order.

c <- seq(from = 15, to = 1)  
for (variable in c) {  
 print(variable)  
}

## [1] 15  
## [1] 14  
## [1] 13  
## [1] 12  
## [1] 11  
## [1] 10  
## [1] 9  
## [1] 8  
## [1] 7  
## [1] 6  
## [1] 5  
## [1] 4  
## [1] 3  
## [1] 2  
## [1] 1

1. Use and show R code to find the mean of all prime numbers 3 to 17 inclusive.

# install.packages("matlab")  
library(matlab)

##   
## Attaching package: 'matlab'

## The following object is masked from 'package:stats':  
##   
## reshape

## The following objects are masked from 'package:utils':  
##   
## find, fix

## The following object is masked from 'package:base':  
##   
## sum

c <- vector()  
for (number in 3:17) {  
 if (isprime(number)) {  
 c <- append(c, number)  
 }  
}  
  
print(c)

## [1] 3 5 7 11 13 17

print(mean(c))

## [1] 9.333333

help("round")

1. Use and show R code to round 17.3838 to the nearest hundredth

round(17.3838, digits = 3)

## [1] 17.384

1. Use and show R code to evaluate the expression 7(53 – 2)2

7\*(53-2)\*2

## [1] 714

1. Use R code to write a function that will calculate the volume of a cylinder. The following formula will be helpful, V = πr 2h. Then use your function to calculate the volume of a cylinder that has a radius of 25 and a height of 10

vol\_of\_cyl <- function(radius, height){  
 volume <- pi\*(radius^2)\*height  
 return(volume)  
}

vol\_of\_cyl(radius = 25, height = 10)

## [1] 19634.95