3rd Assignment

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# Another Header

## R Markdown

### Some header

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

#1 Write a function: input a number x and return x^2+3x+1

cubicf = function(x)

{

return(x^2 + 3\*x + 1)

}

cubicf(3)

#2 Write a function: input a vector and return the product of all the entries in the vector

vector1 <- function(x)

{

return(prod(x))

}

vector1(c(1,2,3,4))

#3 Write a function: input a vector v and a number n and return a vector with its missing data being replaced by n

vector2<- function(v,n)

{

v[is.na(v)]<- n

return(v)

}

v5<- c(5,NA,6)

vector2(v5,6)

#4 Write a function: input a numeric vector and return a vector with its missing data being replaced by the mean of the vector

F4<- function(x)

{

avg <- mean(x,na.rm = TRUE)

x[is.na(x)] <- avg

return(x)

}

> F4(c(NA,2,3,4))