

Week 3 HW 1

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a.) Take in a single vector of values, say $x = \text{seq}(1, 10, 1)$, and return a data frame with three columns, x , x^2 and x^3

```
x = seq(1,10,1)
frame = data.frame(x, x^2, x^3)
frame
```

```
##      x x.2 x.3
## 1    1    1    1
## 2    2    4    8
## 3    3    9   27
## 4    4   16   64
## 5    5   25  125
## 6    6   36  216
## 7    7   49  343
## 8    8   64  512
## 9    9   81  729
## 10  10  100 1000
```

b.) Take in an investment value V and an annual interest rate R , and compute the value of the investment 1 year from now.

```
v = 50000
r = 0.03
time = 1

interest = (v * r) * time
total = interest + v
total
```

```
## [1] 51500
```

c.) Take in a vector of values, and return only the values greater than 5.

```
x
```

```
## [1] 1 2 3 4 5 6 7 8 9 10
```

```
greaterfive = which(x > 5)
greaterfive
```

```
## [1] 6 7 8 9 10
```