

worksheet1BasicExperiencedCodingExercises

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```
dIndex <- c(0:2)
coefficients <- c(3, 4, 1)
range <- c("1st", "2nd", "3rd")
n <- c(dIndex)
x <- c(coefficients)

derivative <- dIndex * coefficients

beegMatrix <- matrix(c(coefficients), nrow = 1, ncol = 3, byrow = TRUE)

rowNamesVector <- c("Coefficient")
rownames(beegMatrix) <- rowNamesVector

colNamesVector <- c(range)
colnames(beegMatrix) <- colNamesVector

beegMatrix
```

```
##           1st 2nd 3rd
## Coefficient    3   4   1
```

```
beegMatrix1stDeriv <- beegMatrix * dIndex

beegMatrix1stDeriv
```

```
##           1st 2nd 3rd
## Coefficient    0   4   2
```

```
dIndex2nd <- dIndex - 1

beegMatrix2ndDeriv <- beegMatrix1stDeriv * dIndex2nd

beegMatrix2ndDeriv
```

```
##           1st 2nd 3rd
## Coefficient    0   0   2
```