Exercise 3.3- 3.4

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Q3.3 a

```r
array(c(1:3, 10:12, 13:15),c(3,3,2),
      dimnames = list(c("ROW1", "ROW2","ROW3"),
                      c("COL1", "COL2", "COL3"),
                      c("Matrix1", "Matrix2")))
```

```
## , , Matrix1
##
##      COL1 COL2 COL3
## ROW1    1   10   13
## ROW2    2   11   14
## ROW3    3   12   15
##
## , , Matrix2
##
##      COL1 COL2 COL3
## ROW1    1   10   13
## ROW2    2   11   14
## ROW3    3   12   15
```
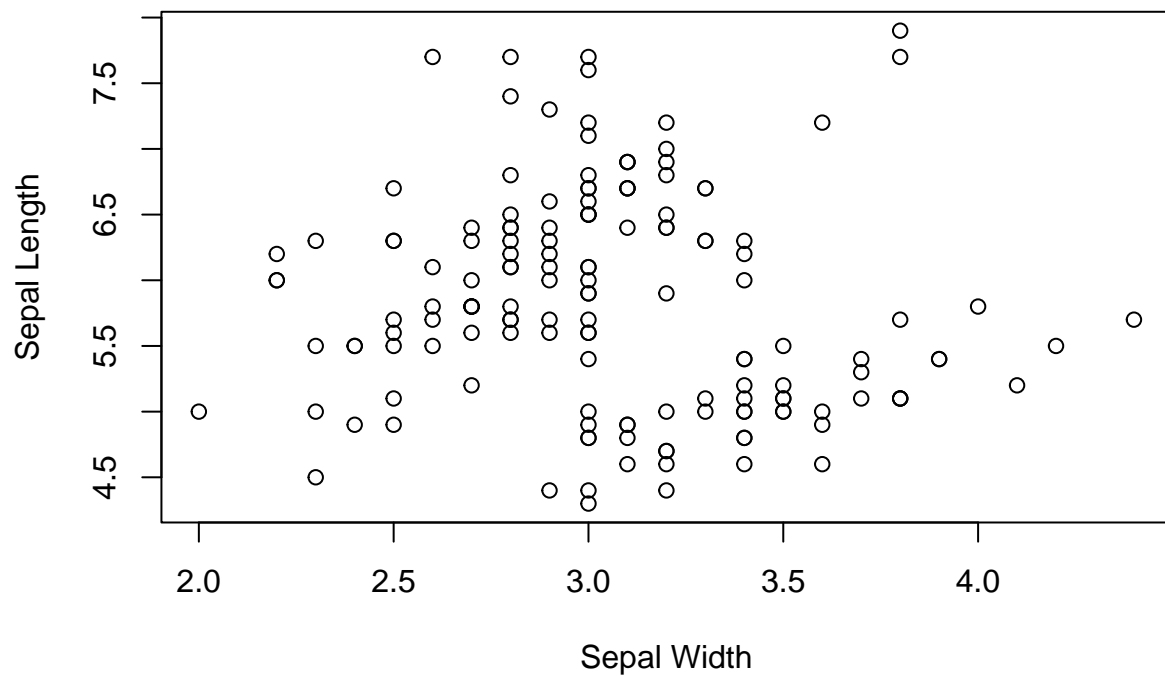
Q3.3 b

```r
array(2:13, c(2,3,2))
```

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

Q3.4

```r
list(iris, (plot(iris$Sepal.Width, iris$Sepal.Length, xlab = "Sepal Width", ylab = "Sepal Length")))
```

```
## [[1]]
##    Sepal.Length Sepal.Width Petal.Length Petal.Width   Species
## 1           5.1         3.5          1.4         0.2    setosa
## 2           4.9         3.0          1.4         0.2    setosa
## 3           4.7         3.2          1.3         0.2    setosa
## 4           4.6         3.1          1.5         0.2    setosa
## 5           5.0         3.6          1.4         0.2    setosa
## 6           5.4         3.9          1.7         0.4    setosa
## 7           4.6         3.4          1.4         0.3    setosa
## 8           5.0         3.4          1.5         0.2    setosa
## 9           4.4         2.9          1.4         0.2    setosa
## 10          4.9         3.1          1.5         0.1    setosa
## 11          5.4         3.7          1.5         0.2    setosa
## 12          4.8         3.4          1.6         0.2    setosa
## 13          4.8         3.0          1.4         0.1    setosa
## 14          4.3         3.0          1.1         0.1    setosa
## 15          5.8         4.0          1.2         0.2    setosa
## 16          5.7         4.4          1.5         0.4    setosa
## 17          5.4         3.9          1.3         0.4    setosa
## 18          5.1         3.5          1.4         0.3    setosa
## 19          5.7         3.8          1.7         0.3    setosa
## 20          5.1         3.8          1.5         0.3    setosa
## 21          5.4         3.4          1.7         0.2    setosa
## 22          5.1         3.7          1.5         0.4    setosa
## 23          4.6         3.6          1.0         0.2    setosa
## 24          5.1         3.3          1.7         0.5    setosa
## 25          4.8         3.4          1.9         0.2    setosa
## 26          5.0         3.0          1.6         0.2    setosa
## 27          5.0         3.4          1.6         0.4    setosa
## 28          5.2         3.5          1.5         0.2    setosa
## 29          5.2         3.4          1.4         0.2    setosa
## 30          4.7         3.2          1.6         0.2    setosa
```

```
## 31            4.8          3.1          1.6          0.2        setosa
## 32            5.4          3.4          1.5          0.4        setosa
## 33            5.2          4.1          1.5          0.1        setosa
## 34            5.5          4.2          1.4          0.2        setosa
## 35            4.9          3.1          1.5          0.2        setosa
## 36            5.0          3.2          1.2          0.2        setosa
## 37            5.5          3.5          1.3          0.2        setosa
## 38            4.9          3.6          1.4          0.1        setosa
## 39            4.4          3.0          1.3          0.2        setosa
## 40            5.1          3.4          1.5          0.2        setosa
## 41            5.0          3.5          1.3          0.3        setosa
## 42            4.5          2.3          1.3          0.3        setosa
## 43            4.4          3.2          1.3          0.2        setosa
## 44            5.0          3.5          1.6          0.6        setosa
## 45            5.1          3.8          1.9          0.4        setosa
## 46            4.8          3.0          1.4          0.3        setosa
## 47            5.1          3.8          1.6          0.2        setosa
## 48            4.6          3.2          1.4          0.2        setosa
## 49            5.3          3.7          1.5          0.2        setosa
## 50            5.0          3.3          1.4          0.2        setosa
## 51            7.0          3.2          4.7          1.4 versicolor
## 52            6.4          3.2          4.5          1.5 versicolor
## 53            6.9          3.1          4.9          1.5 versicolor
## 54            5.5          2.3          4.0          1.3 versicolor
## 55            6.5          2.8          4.6          1.5 versicolor
## 56            5.7          2.8          4.5          1.3 versicolor
## 57            6.3          3.3          4.7          1.6 versicolor
## 58            4.9          2.4          3.3          1.0 versicolor
## 59            6.6          2.9          4.6          1.3 versicolor
## 60            5.2          2.7          3.9          1.4 versicolor
## 61            5.0          2.0          3.5          1.0 versicolor
## 62            5.9          3.0          4.2          1.5 versicolor
## 63            6.0          2.2          4.0          1.0 versicolor
## 64            6.1          2.9          4.7          1.4 versicolor
## 65            5.6          2.9          3.6          1.3 versicolor
## 66            6.7          3.1          4.4          1.4 versicolor
## 67            5.6          3.0          4.5          1.5 versicolor
## 68            5.8          2.7          4.1          1.0 versicolor
## 69            6.2          2.2          4.5          1.5 versicolor
## 70            5.6          2.5          3.9          1.1 versicolor
## 71            5.9          3.2          4.8          1.8 versicolor
## 72            6.1          2.8          4.0          1.3 versicolor
## 73            6.3          2.5          4.9          1.5 versicolor
## 74            6.1          2.8          4.7          1.2 versicolor
## 75            6.4          2.9          4.3          1.3 versicolor
## 76            6.6          3.0          4.4          1.4 versicolor
## 77            6.8          2.8          4.8          1.4 versicolor
## 78            6.7          3.0          5.0          1.7 versicolor
## 79            6.0          2.9          4.5          1.5 versicolor
## 80            5.7          2.6          3.5          1.0 versicolor
## 81            5.5          2.4          3.8          1.1 versicolor
## 82            5.5          2.4          3.7          1.0 versicolor
## 83            5.8          2.7          3.9          1.2 versicolor
## 84            6.0          2.7          5.1          1.6 versicolor
```

```
## 85           5.4          3.0          4.5             1.5 versicolor
## 86           6.0          3.4          4.5             1.6 versicolor
## 87           6.7          3.1          4.7             1.5 versicolor
## 88           6.3          2.3          4.4             1.3 versicolor
## 89           5.6          3.0          4.1             1.3 versicolor
## 90           5.5          2.5          4.0             1.3 versicolor
## 91           5.5          2.6          4.4             1.2 versicolor
## 92           6.1          3.0          4.6             1.4 versicolor
## 93           5.8          2.6          4.0             1.2 versicolor
## 94           5.0          2.3          3.3             1.0 versicolor
## 95           5.6          2.7          4.2             1.3 versicolor
## 96           5.7          3.0          4.2             1.2 versicolor
## 97           5.7          2.9          4.2             1.3 versicolor
## 98           6.2          2.9          4.3             1.3 versicolor
## 99           5.1          2.5          3.0             1.1 versicolor
## 100          5.7          2.8          4.1             1.3 versicolor
## 101          6.3          3.3          6.0             2.5  virginica
## 102          5.8          2.7          5.1             1.9  virginica
## 103          7.1          3.0          5.9             2.1  virginica
## 104          6.3          2.9          5.6             1.8  virginica
## 105          6.5          3.0          5.8             2.2  virginica
## 106          7.6          3.0          6.6             2.1  virginica
## 107          4.9          2.5          4.5             1.7  virginica
## 108          7.3          2.9          6.3             1.8  virginica
## 109          6.7          2.5          5.8             1.8  virginica
## 110          7.2          3.6          6.1             2.5  virginica
## 111          6.5          3.2          5.1             2.0  virginica
## 112          6.4          2.7          5.3             1.9  virginica
## 113          6.8          3.0          5.5             2.1  virginica
## 114          5.7          2.5          5.0             2.0  virginica
## 115          5.8          2.8          5.1             2.4  virginica
## 116          6.4          3.2          5.3             2.3  virginica
## 117          6.5          3.0          5.5             1.8  virginica
## 118          7.7          3.8          6.7             2.2  virginica
## 119          7.7          2.6          6.9             2.3  virginica
## 120          6.0          2.2          5.0             1.5  virginica
## 121          6.9          3.2          5.7             2.3  virginica
## 122          5.6          2.8          4.9             2.0  virginica
## 123          7.7          2.8          6.7             2.0  virginica
## 124          6.3          2.7          4.9             1.8  virginica
## 125          6.7          3.3          5.7             2.1  virginica
## 126          7.2          3.2          6.0             1.8  virginica
## 127          6.2          2.8          4.8             1.8  virginica
## 128          6.1          3.0          4.9             1.8  virginica
## 129          6.4          2.8          5.6             2.1  virginica
## 130          7.2          3.0          5.8             1.6  virginica
## 131          7.4          2.8          6.1             1.9  virginica
## 132          7.9          3.8          6.4             2.0  virginica
## 133          6.4          2.8          5.6             2.2  virginica
## 134          6.3          2.8          5.1             1.5  virginica
## 135          6.1          2.6          5.6             1.4  virginica
## 136          7.7          3.0          6.1             2.3  virginica
## 137          6.3          3.4          5.6             2.4  virginica
## 138          6.4          3.1          5.5             1.8  virginica
```

```
## 139          6.0          3.0          4.8          1.8  virginica
## 140          6.9          3.1          5.4          2.1  virginica
## 141          6.7          3.1          5.6          2.4  virginica
## 142          6.9          3.1          5.1          2.3  virginica
## 143          5.8          2.7          5.1          1.9  virginica
## 144          6.8          3.2          5.9          2.3  virginica
## 145          6.7          3.3          5.7          2.5  virginica
## 146          6.7          3.0          5.2          2.3  virginica
## 147          6.3          2.5          5.0          1.9  virginica
## 148          6.5          3.0          5.2          2.0  virginica
## 149          6.2          3.4          5.4          2.3  virginica
## 150          5.9          3.0          5.1          1.8  virginica
## 
## [[2]]
## NULL
```