Worksheet 12

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Question 1

```r
library(readxl)
Supermarket_data <- read_excel("~/Desktop/STAT 301/Week 14/Supermarket data.xlsx")
Supermarket_data
```

```
## # A tibble: 12 x 5
##    supermarket  meat  fish vegetable ownbrand
##    <chr>       <dbl> <dbl>     <dbl>    <dbl>
##  1 Asda         1     2.39      4.14      4.1
##  2 Anderson     1.46  3         3.61      4
##  3 Tesco        8.02  2.59      4         6
##  4 Hyvee        2.1   5.76      1.46      3.4
##  5 Kwiksave     0.43  0.53      3         0
##  6 Asdaton      4.46  0.36      3.72      3
##  7 Winco        2.73  2.4       7         3
##  8 Kwoaski      4.65  1.06      1.54      1
##  9 Waitrose     9.72  5.78     13.1      31.3
## 10 Lund         0.49  2.05      8.32      3.9
## 11 Freedy      12.7   4.86      0.38     16.3
## 12 Safeway     13.8   0.33     11.9      46.9
```

```r
library(factoextra)
```

```
## Loading required package: ggplot2
```

```
## Welcome! Want to learn more? See two factoextra-related books at https://goo.gl/ve3WBa
```

```r
library(stats)
market1 <- scale(Supermarket_data[,c("meat", "fish", "vegetable", "ownbrand")])
d2 <- dist(market1, method = "euclidean")
model2 <- hclust(d2, method = "complete")
fviz_dend(model2, main = "Cluster for the supermarket data")
```

```
## Warning: The '<scale>' argument of 'guides()' cannot be 'FALSE'. Use "none" instead as
## of ggplot2 3.3.4.
## i The deprecated feature was likely used in the factoextra package.
##   Please report the issue at <https://github.com/kassambara/factoextra/issues>.
## This warning is displayed once every 8 hours.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.
```

Cluster for the supermarket data