Module 1 Assignment 3

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1.

```
## [1] NA
```

2.

```
## [1] 64.94737
```

3.

```
##  [1] 63 60 65 NA 61 61 59 64 63 63 65 64 63 65
```

4.

```
## [1] "Mystery" "Hazel"   "Spud"     "Pancho"
```

5.

```
## [1] "Spud"
```

6.

```
## [1] "Spud"
```

8.

```
##   X group_id paddle_id length_in width_in depth_in spines insects damage
## 1 1        1         1      12.5      8.5     0.50      Y       Y   Some
## 2 2        1         2      12.3      8.0     0.50      Y       Y   Some
## 3 3        1         3      14.5     11.0     0.70      Y       Y   Some
## 4 4        1         4      10.5      7.0     0.75      Y       Y   Some
## 5 5        1         5       8.5      6.5     0.20      Y       Y   Some
## 6 6        1         6      14.0     13.0     1.20      Y       N   Some
##   location                                      group_members temp_F
## 1   Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
## 2    Fifth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
## 3    Fifth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
## 4   Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
## 5   Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
```

```
## 6     Third Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani     61
##               species    size
## 1 Opuntia engelmannii Medium
## 2 Opuntia engelmannii Medium
## 3 Opuntia engelmannii Medium
## 4 Opuntia engelmannii Medium
## 5 Opuntia engelmannii Medium
## 6 Opuntia engelmannii Medium
```
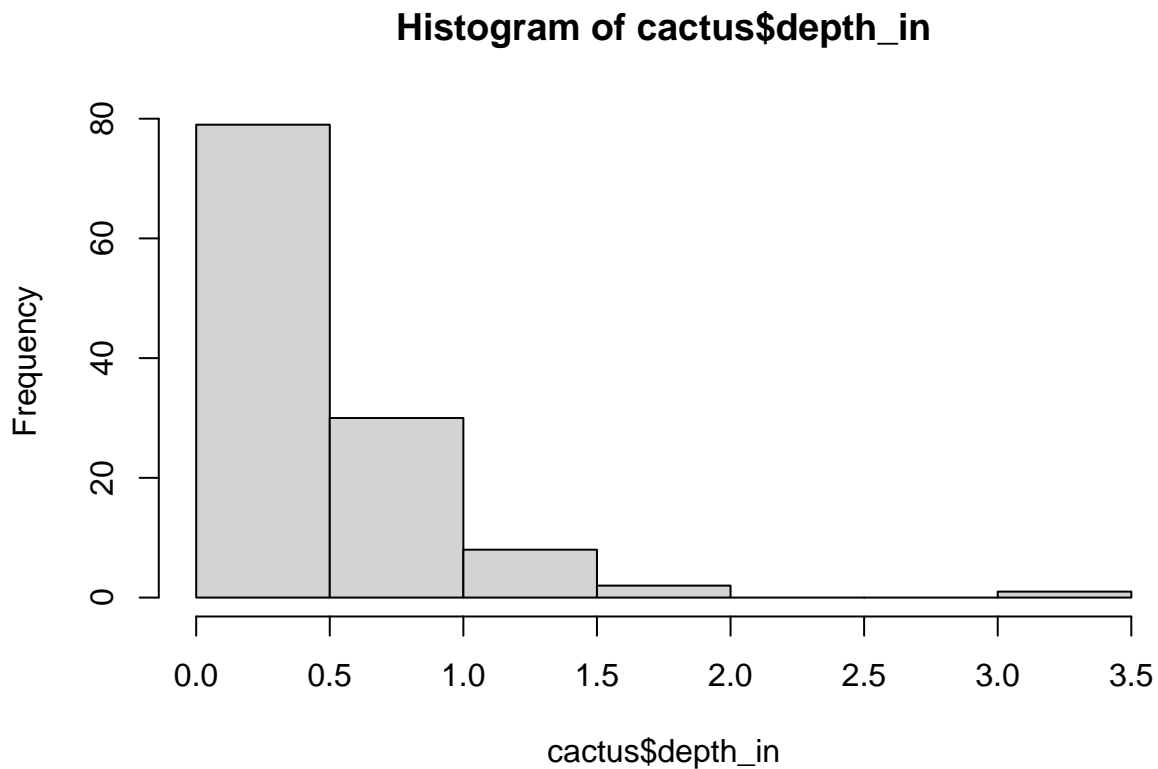
9.

```
## [1] 9.809542
```

10.

```
## [1] 9.8
```

11.

Histogram of cactus$depth_in

13.

```
##  [1] "Most" "Some" "Some" "Some" "Some" "Some" "All"  "Most" "Some" "None"
## [11] "Most" "Most" "None" "None" "None" "Most" "Most" "None" "None" "Some"
## [21] "Some" "Some" "Some" "Most" "Some" "Some" "Some" "Some" "Some" "None"
## [31] "None" "Some" "Most" "Some" "None" "Some" "Some" "Some" "Some" "Some"
## [41] "Some" "Some" "Some" "Some" "None" "None" "Some" "None" "None" "None"
## [51] "Some" "None" "Some" "Some" "Some" "None" "Some" "None" "None" "None"
## [61] "None" "None" "Some" "None" "None"
```

14. Just a note that I am printing the first 10 rows of each data frame, not necessarily the entire thing, to include in the answer key.

```
##    X group_id paddle_id length_in width_in depth_in spines insects damage
## 41 41        5         1       8.5      4.5     0.50      N       Y   Some
## 42 42        5         2       7.5      4.5     0.50      N       N   None
## 43 43        5         3      10.0      5.0     0.50      N       Y   Most
## 44 44        5         4      12.0      6.5     0.50      N       Y   Most
## 45 45        5         5       8.5      4.5     0.25      N       N   None
## 46 46        5         6       9.5      5.0     0.50      N       N   None
## 47 47        5         7      10.0      6.5     0.50      N       N   None
## 48 48        5         8       7.5      4.0     0.50      N       Y   Most
## 49 49        5         9       3.5      3.0     0.50      N       Y   Most
## 50 50        5        10       8.0      3.0     0.25      N       N   None
##    location                                        group_members temp_F
## 41    Third Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 42    Third Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 43   Fourth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 44    Sixth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 45    Fifth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 46    Sixth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 47    Sixth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 48    Sixth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 49  Seventh Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
## 50    Eigth Delaney Jacobs, Katherine Meade, Isobel Manar-Fike       61
##                 species  size
## 41 Opuntia ficus-indica Large
## 42 Opuntia ficus-indica Large
## 43 Opuntia ficus-indica Large
## 44 Opuntia ficus-indica Large
## 45 Opuntia ficus-indica Large
## 46 Opuntia ficus-indica Large
## 47 Opuntia ficus-indica Large
## 48 Opuntia ficus-indica Large
## 49 Opuntia ficus-indica Large
## 50 Opuntia ficus-indica Large


##    X group_id paddle_id length_in width_in depth_in spines insects damage
## 1  1        1         1      12.5      8.5     0.50      Y       Y   Some
## 2  2        1         2      12.3      8.0     0.50      Y       Y   Some
## 3  3        1         3      14.5     11.0     0.70      Y       Y   Some
## 4  4        1         4      10.5      7.0     0.75      Y       Y   Some
## 5  5        1         5       8.5      6.5     0.20      Y       Y   Some
## 6  6        1         6      14.0     13.0     1.20      Y       N   Some
## 7  7        1         7      12.0     14.0     2.00      Y       Y   Some
## 8  8        1         8       9.0      7.5     1.00      Y       Y   Some
## 9  9        1         9      15.0     11.7     1.20      Y       Y   Some
## 10 10       1        10      12.8     10.0     0.90      Y       Y   Some
##    location                                          group_members temp_F
## 1    Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani       61
## 2     Fifth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani       61
## 3     Fifth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani       61
## 4    Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani       61
## 5    Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani       61
```

```
## 6      Third Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani      61
## 7      First Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani      61
## 8      Third Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani      61
## 9      Third Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani      61
## 10    Fourth Emilio Reyes,Megan Melendez,Paige Fuss, Madison Tani      61
##                  species    size
## 1  Opuntia engelmannii Medium
## 2  Opuntia engelmannii Medium
## 3  Opuntia engelmannii Medium
## 4  Opuntia engelmannii Medium
## 5  Opuntia engelmannii Medium
## 6  Opuntia engelmannii Medium
## 7  Opuntia engelmannii Medium
## 8  Opuntia engelmannii Medium
## 9  Opuntia engelmannii Medium
## 10 Opuntia engelmannii Medium
```

15.

```
## [1] 5.242917
```

```
## [1] 8.341
```

16.

```
## [1] 1.782769
```

```
## [1] 2.256842
```