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## Prepare for the Analysis

Reflect on the Question

Analyze the Data

Draw Conclusions

### Primary Research Question

How long do animals stay in the shelter before they are adopted?

### Breakdown Your Analysis

Let's break this analysis into its required steps:

1. Determine which animals in the dataset were adopted.
2. Generate a histogram for the length of time these adopted animals were in the shelter.
3. Select the appropriate measures of center and spread to describe the distribution.
4. Identify which animal was an outlier on this particular variable.

## Here is the code you will use:

```
#Find the number of animals that were adopted
```

```
table(animaldata$Outcome.Type)
```

```
#Pull out only adopted animals
```

```
adopted <- animaldata[animaldata$Outcome.Type=="Adoption",]
```

```
#Pull out just the days in shelter for the adopted animals
```

```
daystoadopt <- adopted$Days.Shelter
```

```
#Visualize and describe this variable
```

```
hist(daystoadopt)
```

```
fivenum(daystoadopt)
```

```
mean(daystoadopt)
```

```
sd(daystoadopt)
```

```
which(animaldata$Days.Shelter==max(daystoadopt))
```

---

## problem

1/1 point (graded)

1. What will the line of the code do for us?

```
table(animaldata$Outcome.Type)
```

☐ It will assign the outcome "adopted" to all animals.

☐ It will count the number of variables in the dataset.

- ☒ It will generate a frequency table to show us how many animals experienced each type of outcome. ✓

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You have used 1 of 1 attempt

## problem

1/1 point (graded)

2. We are creating a new object called *daystoadopt*. What does this object contain?

- ☒ The number of days that animals spent in the shelter if their outcome type was "Adoption." ✓
- ☐ The names of all of the animals that were in the shelter and adopted.
- ☐ The outcome types for all of the animals that were in the shelter.

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## problem

1/1 point (graded)

3. Which line in the R code produces a visual of the distribution of *daystoadopt*?

☐ summary(daystoadopt)

☒ hist(daystoadopt) ✓

☐ table(animaldata\$Outcome.Type)

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## problem

1/1 point (graded)

4. The following line of R code will produce a row number:

**`which(animaldata$Days.Shelter==max(daystoadopt))`**

What will this row number tell us?

☒ It will tell us the row that contains the animal that took the longest to be adopted. ✓

☐ It will tell us the row that contains the animal that was in the shelter the longest.

☐ It will tell us the row that contains the animal that never got adopted.

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# problem

1/1 point (graded)

5. Suppose we have run the following code to subset the dataset for only male animals. What is the cause of the error below? (Examine the data set in R for help.)

```
animaldata<-AnimalData
```

```
males<-animaldata[animaldata$Sex == 'Male']
```

```
Error in [.data.frame`(animaldata, animaldata$Sex ==  
"Male") :  
undefined columns selected
```

- ☐ We should not type "animaldata" again inside the brackets.
- ☐ The "Sex" variable is composed of "M" and "F" instead of "Male" and "Female".
- ☒ We are missing a comma inside of the brackets. ✓
- ☐ The "Sex" variable is spelled differently in our dataset.

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