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Response Sheet

Directions: Record your responses to the lab questions in the spaces provided.

Where'd we leave off ...

Variable Types

(1) Is `height` a numerical or categorical variable? Why?

(2) Is `sex` a numerical or categorical variable? Why?

(3) List either the different categories or what you think the measured units are for `height` and `sex`.

Which is which?

Use the code's output to help you complete the following:

(4) Write down 3 variables that you think are *categorical* variables and why.

(5) Write down 3 variables that you think are *numerical* variables and why.

Data Structures

(6) What information does the `str` function output?

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(7) Were you able to correctly guess which variables were categorical and numeric? Which ones did you mislabel?

Visualizing data

(8) Choose one numeric variable. Write and run the codes to create a `bargraph` and a `histogram`.

(9) Choose one categorical variable. Write and run the codes to create a `bargraph` and a `histogram`.

(10) Which function, either `bargraph` or `histogram`, is better at visualizing categorical variables? Which is better at visualizing numerical variables?

We have options

(11) Write and run the code to make a graph that shows the distribution of people's `weight`.

(12) Describe the distribution of `weight`. Make sure to describe the *shape*, *center* and *spread* of the distribution.

(13) How did including the option `nint = 3` change the histogram?

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(14) Does setting `nint = 3` impact how you would describe the shape, center and spread?

(15) Try other values for `nint`. What value produced the best graph? Why?

How often do people text & drive?

(16) Write and run the code to make a graph that shows how often people in our data texted while driving.

(17) What does the y-axis represent?

(18) What does the x-axis tell us?

(19) Would you say that *most* people *never* texted while driving? What does the word *most* mean?

(20) Approximately what percent of the people texted while driving for 20 or more days? (Hint: There are 17232 students in our data.)

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Does texting and driving differ by sex?

(21) Write and run the code to make a side-by-side `bargraph` that could answer this question: *Does texting and driving differ by sex?* Use the following fill-in-the-blank code as a hint.

```
bargraph(~__________, data = __________, groups = __________)
```

(22) Write a sentence explaining how boys and girls differ when it comes to texting while driving.

(23) Would you say that most girls never text and drive? Would you say that most boys never text and drive?

(24) How did including the `groups` argument in your code change the graph?

Do males and females have similar heights?

(25) Write and run the code to create a `histogram` for the `height` of males and females using the `groups` argument.

(26) Can you use this graphic to answer the question at the top of the slide? Why or why not?

(27) Is grouping numeric values, such as heights, as helpful as grouping categorical variables, such as texting & driving?

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Do males and females have similar heights?, continued

(28) Write and run the code to create a split `histogram` to answer the questions below:

(29) Do you think males and females have similar heights? Use the plot you create to justify your answer.

(30) Just like we did for the `histogram`, is it possible to create a *split* `bargraph`? Write and run the code to create a `bargraph` of `drive_text` that's split by `sex` to find out.

On your own:

(31) What other factors do you think might affect how often people text and drive?

(32) Choose one variable from the `cdc` data, make a graph, and use the graph to describe how `drive_text` use differs with this variable.