Congratulations! You passed!

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1. Which of the following tasks can you complete with ggplot2 features? Select all that apply. **1 / 1 point**

- [x] Add labels and annotations to a plot

  Correct
  ggplot2 includes features that let you create many different types of plots, customize the visual features of a plot, and add labels and annotations to a plot.

- [x] Customize the visual features of a plot

  Correct
  ggplot2 includes features that let you create many different types of plots, customize the visual features of a plot, and add labels and annotations to a plot.

- [x] Create many different types of plots

  Correct
  ggplot2 includes features that let you create many different types of plots, customize the visual features of a plot, and add labels and annotations to a plot.

- [ ] Automatically clean data before creating a plot

2. In ggplot2, what symbol do you use to add layers to your plot? **1 / 1 point**

- ( ) The equal sign (=)
- ( ) The pipe operator (%>%)
- (•) The plus sign (+)
- ( ) The ampersand symbol (&)

Correct
In ggplot2, you use the plus sign (+) to add layers to your plot.

3. A data analyst creates a plot using the following code chunk: **1 / 1 point**

```
ggplot(data = penguins) +
    geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))
```

Which of the following represents a function in the code chunk? Select all that apply.

- [x] The geom_point function

  Correct
  The functions in the code chunk are the ggplot() function, the geom_point() function, and the aes() function. The ggplot() function specifies the data frame to use for the plot. The geom_point() function specifies the geometric object that represents the data. The aes() function specifies the aesthetic attributes of the plot.

- [x] The aes function

  Correct
  The functions in the code chunk are the ggplot() function, the geom_point() function, and the aes() function. The ggplot() function specifies the data frame to use for the plot. The geom_point() function specifies the geometric object that represents the data. The aes() function specifies the aesthetic attributes of the plot.

- [ ] the data function
- [x] The ggplot function

  Correct
  The functions in the code chunk are the ggplot() function, the geom_point() function, and the aes() function. The ggplot() function specifies the data frame to use for the plot. The geom_point() function specifies the geometric object that represents the data. The aes() function specifies the aesthetic attributes of the plot.

4. Fill in the blank: In ggplot2, the term mapping refers to the connection between variables and _____ . **1 / 1 point**

- (•) aesthetics
- ( ) data frames
- ( ) geoms
- ( ) facets

Correct
Mapping means matching up a specific variable in your data set with a specific aesthetic. You use the aes() function to define the mapping between your data and your plot.

5. A data analyst creates a scatterplot with a lot of data points. The analyst wants to make some points on the plot more transparent than others. What aesthetic should the analyst use? **1 / 1 point**

- ○ Color
- ◉ Alpha
- ○ Fill
- ○ Shape

Correct
The analyst should use the alpha aesthetic. The alpha aesthetic makes some points on a plot more transparent than others.

6. You are working with the penguins dataset. You create a scatterplot with the following code: **1 / 1 point**

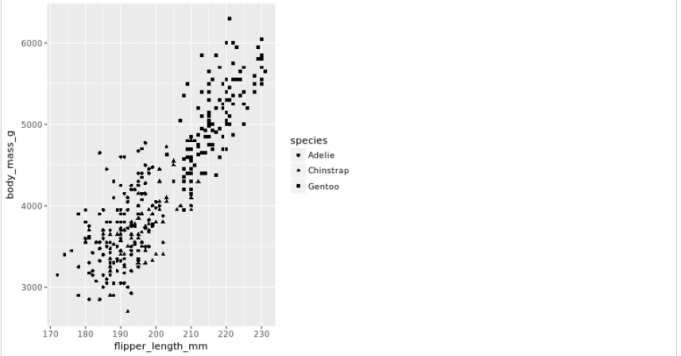
```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))
```

You want to highlight the different penguin species on your plot. Add a code chunk to the second line of code to map the aesthetic *shape* to the variable *species*.

NOTE: the three dots (...) indicate where to add the code chunk.

```
1  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, shape = species))
```

Run
Reset



Which penguin species does your visualization display?

- ○ Adelie, Gentoo, Macaroni
- ○ Adelie, Chinstrap, Emperor
- ◉ Adelie, Chinstrap, Gentoo
- ○ Emperor, Chinstrap, Gentoo

Correct
You add the code chunk `shape = species` to the second line of code to map the aesthetic shape to the variable species. The correct code is `ggplot(data = penguins) + geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, shape = species))`. Inside the parentheses of the aes() function, after the comma that follows y = body_mass_g, write the aesthetic (shape), then an equals sign, then the variable (species). The data points for each penguin species now appear in different shapes.

Your visualization displays the Adelie, Chinstrap, and Gentoo penguin species.

7. Fill in the blank: The _____ creates a scatterplot and then adds a small amount of random noise to each point in the plot to make the points easier to find. **1 / 1 point**

- ◉ geom_jitter() function
- ○ geom_point() function
- ○ geom_bar() function
- ○ geom_smooth() function

Correct
The geom_jitter() function creates a scatterplot and then adds a small amount of random noise to each point in the plot to make the points easier to find.

8. You are working with the diamonds dataset. You create a bar chart with the following code: **1 / 1 point**

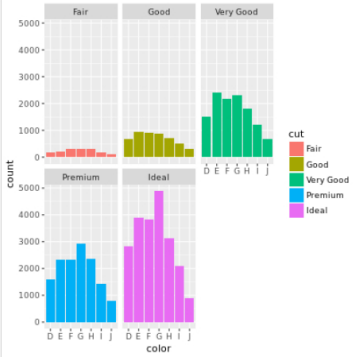
```
ggplot(data = diamonds) +
  geom_bar(mapping = aes(x = color, fill = cut)) +
```

You want to use the facet_wrap() function to display subsets of your data. Add the code chunk that lets you facet your plot based on the variable *cut*.

```
1  facet_wrap(~cut)
```

Run

Reset



How many subplots does your visualization show?

- 3
- 4
- 6
- 5

Correct
You add the code chunk `facet_wrap(~cut)` to facet your plot based on the variable cut. The correct code is `ggplot(data = diamonds) + geom_bar(mapping = aes(x = color, fill = cut)) + facet_wrap(~cut)`. Inside the parentheses of the facet_wrap() function, write a tilde symbol (~) followed by the name of the variable you want to facet. The facet_wrap() function lets you display subsets of your data.

Your visualization shows 5 subplots.

9. A data analyst uses the annotate() function to create a text label for a plot. Which attributes of the text can the analyst change by adding code to the argument of the annotate() function? Select all that apply. **1 / 1 point**

- [x] Change the font style of the text

Correct
By adding code to the argument of the annotate() function, the analyst can change the font style, color, and size of the text.

- [ ] Change the text into a title for the plot
- [x] Change the size of the text

Correct
By adding code to the argument of the annotate() function, the analyst can change the font style, color, and size of the text.

- [x] Change the color of the text

Correct
By adding code to the argument of the annotate() function, the analyst can change the font style, color, and size of the text.

10. You are working with the penguins dataset. You create a scatterplot with the following lines of code: **1 / 1 point**

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g)) +
```

What code chunk do you add to the third line to save your plot as a png file with "penguins" as the file name?

- `ggsave("png.penguins")`
- `ggsave("penguins")`
- `ggsave("penguins.png")`
- `ggsave(penguins.png)`

Correct
You add the code chunk `ggsave("penguins.png")` to save your plot as a png file with "penguins" as the file name. Inside the parentheses of the ggsave() function, type a quotation mark followed by the file name (penguins), then a period, then the type of file (png), then a closing quotation mark.