Congratulations! You passed!
TO PASS 80% or higher

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Weekly challenge 4

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

- [ ] Automatically clean data before creating a plot
- [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] 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.

- [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.

2. A data analyst creates a bar chart with the diamonds dataset. They begin with the following line of code: **1 / 1 point**

```
ggplot(data = diamonds)
```

What symbol should the analyst put at the end of the line of code to add a layer to the plot?

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

Correct
The analyst should put the plus sign (+) at the end of the line of code to add a layer to the plot. The first line of code is `ggplot(data = diamonds) +`.

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 variable in the code chunk? Select all that apply.

- [x] `flipper_length_mm`

Correct
The two variables in the code are `flipper_length_mm` and `body_mass_g`. The two variables are part of the penguins dataset. The aesthetic *x* maps the variable `flipper_length_mm` to the x-axis of the plot. The aesthetic *y* maps the variable `body_mass_g` to the y-axis of the plot.

- [x] `body_mass_g`

Correct
The two variables in the code are `flipper_length_mm` and `body_mass_g`. The two variables are part of the penguins dataset. The aesthetic *x* maps the variable `flipper_length_mm` to the x-axis of the plot. The aesthetic *y* maps the variable `body_mass_g` to the y-axis of the plot.

- [ ] `y`

- [ ] `x`

4. A data analyst uses the aes() function to define the connection between their data and the plots in their visualization. What argument is used to refer to matching up a specific variable in your data set with a specific aesthetic? **1 / 1 point**

- ( ) Jittering
- ( ) Faceting
- (•) Mapping
- ( ) Annotating

✓ **Correct**
Mapping is an argument that matches 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**

- ( ) Shape
- ( ) Fill
- ( ) Color
- (•) Alpha

✓ **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 each penguin species in your plot. Add a code chunk to the second line of code to map the aesthetic *color* 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, ...))
```

Run
Reset

Which penguin species does your visualization display?

- (•) Adelie, Chinstrap, Gentoo
- ( ) Chinstrap, Emperor, Gentoo
- ( ) Adelie, Chinstrap, Macaroni
- ( ) Adelie, Emperor, Gentoo

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

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

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

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

What does the geom_jitter() function do to the points in the plot?

- ( ) Adds a small amount of random shapes at each point in the plot
- ( ) Adds random colors to each point in the plot
- (•) Adds a small amount of random noise to each point in the plot
- ( ) Decrease the size of each point in the plot

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 *color*.

```
1
```

Run

Reset

How many subplots does your visualization show?

- 8
- 9
- 7
- 6

Correct

You add the code chunk `facet_wrap(~color)` to facet your plot based on the variable color. The correct code is `ggplot(data = diamonds) + geom_bar(mapping = aes(x = color, fill = cut)) + facet_wrap(~color)`. 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 7 subplots.

9. A data analyst creates a scatterplot. The analyst wants to put a text label on the plot to call out specific data points. What function does the analyst use? **1 / 1 point**

- The ggplot() function
- The annotate() function
- The geom_smooth() function
- The facet_grid() function

Correct

The analyst uses the annotate() function. The annotate() function can put a text label on a plot to call out specific data points.

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 pdf file with "penguins" as the file name?

- `ggsave("penguins.pdf")`
- `ggsave("pdf.penguins")`
- `ggsave(penguins.pdf)`
- `ggsave(=penguins)`

Correct

You add the code chunk `ggsave("penguins.pdf")` to save your plot as a pdf 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 (pdf), then a closing quotation mark.