

Chapter 5 Module Quiz

Due 7 Jun at 23:59	Points 20	Questions 20	Available until 12 Jun at 23:59
Time limit None			

Instructions

This is a graded quiz worth 1% of your course grade. The quiz covers the key learning objectives of Chapter 5.

Attempt history

	Attempt	Time	Score
LATEST	Attempt 1	4 minutes	20 out of 20

Score for this quiz: **20** out of 20
Submitted 31 May at 2:56
This attempt took 4 minutes.

Correct!

Question 1

1 / 1 pts

In ggplot 2, the process of linking variables in data sets to aesthetics in a geom is known as what?

☒ Mapping

☐ Transforming

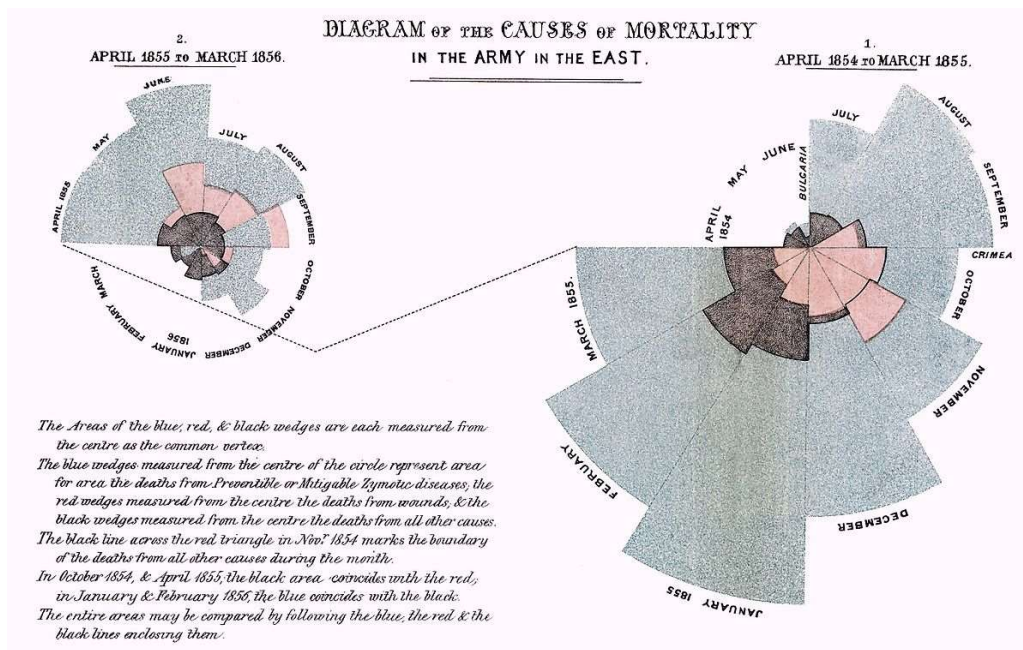
☐ Coding

☐ Binding

Question 2

1 / 1 pts

Which one of the following visual elements does the coxcomb diagram use to represent a proportion? (More than one might be correct)



Correct!

☒ Area☐ Colour☐ Length☐ Angle**Question 3****1 / 1 pts**

Consider the data visualisation attached. This visualisation is an example of which one of the following data visualisation methods?

☐ Pie chart☐ Scatter plot☐ Bar chart☒ Histogram

Correct!

Question 4

1 / 1 pts

Which one of the following is NOT an example of a geom_ in ggplot2?

☐ geom_bar()☒ geom_scatter()☐ geom_boxplot()☐ geom_point()

Correct!

Question 5**1 / 1 pts**

What is the main limitation of a histogram used to visualise the distribution of a quantitative variable?

Correct!

- ☐ Do not show variability.
- ☒ Adjusting the bin width can result in drastic changes to appearance.
- ☐ Use counts instead of density.
- ☐ Outliers cannot be readily detected.

Question 6**1 / 1 pts**

The box plot represents many different statistics. Which one of the following is NOT represented?

Correct!

- ☐ Outliers
- ☐ 2nd Quartile
- ☒ Standard deviation
- ☐ IQR

Question 7**1 / 1 pts**

Which of the following geoms is appropriate for visualising two ratio variables?

Correct!

- ☐ `geom_dotplot()`
- ☒ `geom_point()`

☐ geom_mosaic()☐ geom_bar()**Question 8****1 / 1 pts**

Which of the following geoms is appropriate for visualising one ordinal and one nominal variable?

☐ geom_dotplot()☒ geom_mosaic()☐ geom_histogram()☐ geom_point()**Correct!****Question 9****1 / 1 pts**

Which of the following geoms is appropriate for visualising one nominal and one ratio variable?

☒ geom_violin()☐ geom_histogram()☐ geom_smooth()☐ geom_point()**Correct!****Question 10****1 / 1 pts**

Faceting a data visualisation is also known as which of the following?

- ☐ Juxtaposing
- ☐ Filtering
- ☐ Transforming
- ☒ Latticing

Correct!

Question 11

1 / 1 pts

Which one of the following geoms will add a trend line to a scatter plot?

- ☐ geom_point
- ☐ geom_jitter
- ☐ geom_line
- ☒ geom_smooth

Correct!

Question 12

1 / 1 pts

Which one of the following aesthetics can be used to map a variable to the colour of a geom?

- ☐ shape
- ☒ fill
- ☐ x
- ☐ size

Correct!

Question 13**1 / 1 pts**

geom_violin() plots in ggplot2 are based on which one of the following statistical transformations?

Correct!

- ☒ Density estimate
- ☐ Binning
- ☐ Quartiles
- ☐ Log transformation

Question 14**1 / 1 pts**

Why is it a good idea to add error bars, displaying 95% CIs, in data visualisations including summary statistics (e.g. the mean)?

Correct!

- ☐ CIs provide formal tests of statistical significance.
- ☐ CIs provide an interval where we are 95% confident the true population parameter lies.
- ☐ CIs provide insight into the dispersion of the data.
- ☒ CIs are a visual representation of the level of uncertainty in our estimates.

Question 15**1 / 1 pts**

How many coordinate systems does ggplot2 have?

☐ 1

☐ 2

☐ 3

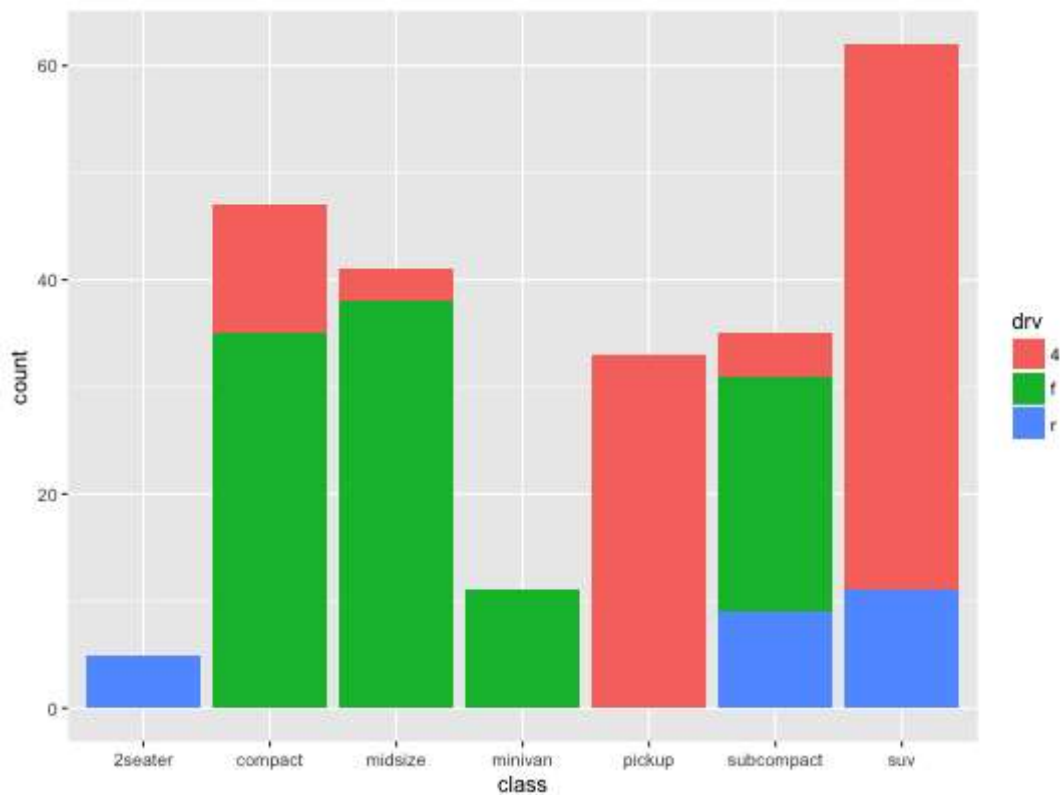
☒ 4

Correct!

Question 16

1 / 1 pts

Consider the following stacked bar chart. Which one of the following options would you add to `geom_bar()` to position the bars within each car type side-by-side?



☐ `position = position_jitter()`

☐ `position = position_nudge()`

Correct!☐ position = position_jitterdodge()☒ position = "dodge"**Question 17****1 / 1 pts**

Including the ``stat = "identity"'` option in ``geom_bar()'` will result in which one of the following effects?

☐ ggplot will tally the frequency of the x aesthetic and use the bar height to represent this count.☐ ggplot will add ID values to outliers.☒ ggplot will set the bar height to the value specified by the y aesthetic.☐ ggplot will convert bars to percentages.**Correct!****Question 18****1 / 1 pts**

Which one of the following is NOT a recognised component of the layered grammar of graphics used by ggplot2?

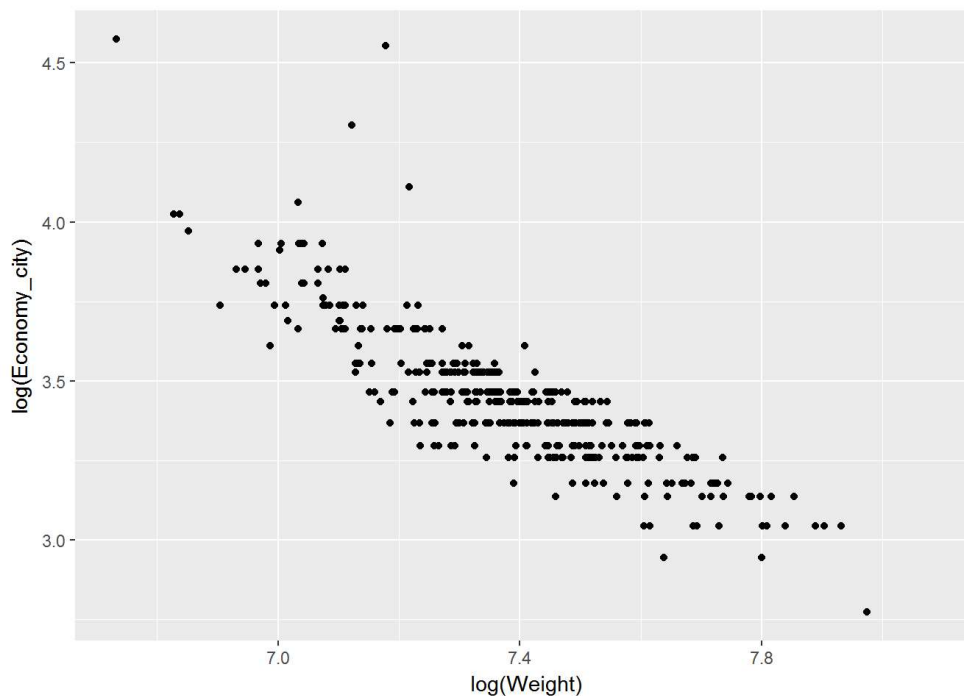
☐ Geometric objects☒ R☐ Scales☐ Data**Correct!**

Question 19**1 / 1 pts**

Which one of the following plots uses `stat = "identity"` by default?

Correct!☒ Scatter plot☐ Histogram☐ Bar plot☐ Box plot**Question 20****1 / 1 pts**

Match the plot with the correct ggplot2 code.

**Correct!**☒

`qplot(x = log(Weight), y = log(Economy_city), data = Cars, geom = "point")`

☐

`qplot(x = Weight, y = Economy_city, data = Cars, geom = "point")`



```
qplot(x = Weight,y = Economy_city, data = Cars,geom = "point", log = "xy")
```



```
qplot(x = log(Weight),y = log(Economy_city), data = Cars,geom =  
"point",colour = Cylinders)
```

Quiz score: **20** out of 20