Questions 1-3

Here is a contingency table of college students with their **Favorite Color** (Red or Blue) down the columns and their **School** (Berkeley or Stanford) across the rows.

	Red	Blue
Berkeley	10	90
Stanford	60	40

Question 1

Find the proportion of all students who attend Berkeley. What type of proportion is this?

Question 2

Find the proportion of all students who attend Berkeley *and* like red best. What type of proportion is this?

Question 3

Of the students who attend Berkeley, find the proportion that like red best. What type of proportion is this?

Questions 4-5

RMS Titanic was a British passenger liner with 2,224 people aboard (including both passengers and crew). The Titanic sank in the North Atlantic Ocean on 15 April 1912 after striking an iceberg on her way to New York City. It was the deadliest sinking of a single ship at the time with almost 70% of the 2,224 passengers and crew dying.

Below are the first five rows of 2,224 for a data frame called `titanic`.

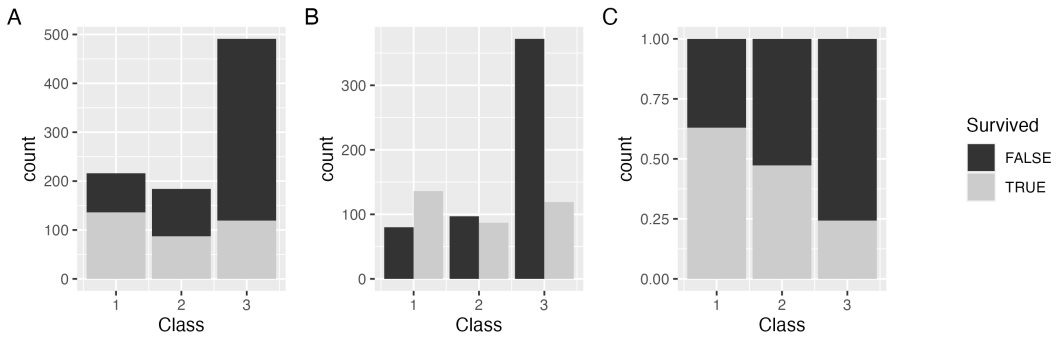
Name	Sex	Age	Fare	Class	Survived
Braund, Mr. Owen Harris	male	22	7.25	3	FALSE
Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38	71.28	1	TRUE
Heikkinen, Miss. Laina	female	26	7.92	3	TRUE
Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	53.10	1	TRUE
Allen, Mr. William Henry	male	35	8.05	3	FALSE

Question 4

What is the unit of observation for `titanic`?

Question 5

The three following graphs were generated using `titanic`.



Which graph is **best** used to answer the following questions? *Write the letter associated with the graph to the right of each question*

How many first class passengers survived the Titanic's sinking? _____

Is there an association between a passenger's class and their survival? _____

What is the mode of the `Class` variable? _____

Questions 6-7

Open up RStudio and write down the code you used to complete each of the following questions in the space below. *Make sure you load in any libraries where necessary!*

Question 6

Consider the vector `q6` which was made as follows:

```
q6 <- c(1,2,3,4,5,6,NA)
```

Load `q6` as is into your session. Then, write R code to calculate the mean of `q6` so that the result is 3.5 (this is the mean of the numbers 1 through 6). *Hint: how can you learn more about the function `mean()`?*

Question 7

The `promote` dataset can be found in the `stat20data` package. Using this data, write `ggplot2` code to make a stacked, normalized bar chart having identified gender on the x axis, with the bars being filled in by promotion decision. Write the code you used below. Then, make a claim about the association between the two variables (we will revisit this study in more detail later in the course)!