MTH208a: Worksheet 2

Introduction to R cont...

We have familiarized ourselves with some starter exercises in `R`. Now let's try to do some visual and exploratory analyses

1. Recall the seating chart for this course

   ```
   seat <- read.csv("https://dvats.github.io/assets/course/mth208/seating.csv")
   ```

   MSc students have roll numbers starting with "22" and BS-MS students have roll numbers starting with "21" or "20". Calculate the number of MSc students enrolled in this course.

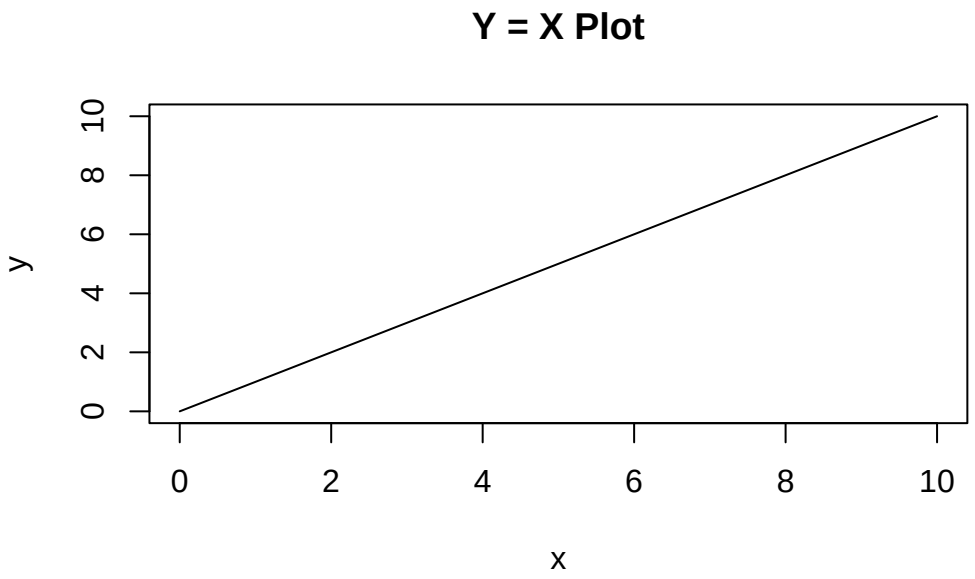
2. An "all-rounder" in cricket is a player who performs well in both batting and bowling. The dataset below has the batting and bowling ODI averages of selected male players.

   ```
   cricket <- read.csv("https://dvats.github.io/assets/course/mth208/battingbowling.csv")
   ```

   (A high batting average is good, a high bowling average is bad.) Let's say a decent batter is someone with a batting average higher than 25 and a decent bowler is someone with a bowling average below 40.

   1. Create a sub-dataset of all all-rounders.
   2. Which team has the most all-rounders?
   3. Which team has the least all-rounders.

3. The `plot()` function can be used to make a variety of plots in `R`. Do `?plot` on the console to learn how the syntax for plots works. Reproduce the following $y = x$ plot given below.



4. For $n = 1, \ldots, 1000$, make a plot of n versus $f(n)$ where

$$f(n) = \left(1 + \frac{1}{n}\right)^n$$

Using `abline()`, draw a horizontal line, in red, at the value e.