1. The number of student scores
2. **Categorical**- Course Section, Student Count

**Quantitative**- Grades

1. **See Output Below**
2. **A.** Both course sections had a total of 19 students. From what is seen in the graph, the Regular tended to do better than the sports section. On average the Regular section had higher counts in the 300+ range.

**B.** No, in some sections various students scored better than the other section. You can see this with the Sports section where one student scored 395 points out of 400. However, on average the Regular section seemed to score better than the Sports section, it does mean it is a guarantee that the Regular section student would score better than a Sports student.

**C.** Another variable that would come into play here would be whether or not the student had a background in the topic being taught or if they took a course in the past that was similar. This may provide them with an upper hand to already having knowledge of the topic at hand. This may cause the data to be skewed in a specific direction if students in one section all took a course similar in the past.

**Output and Graphs:**

**> #Setup of initial exercise 3#**

**> scores <- read.csv("/Users/Brett/Downloads/scores.csv")**

**> print(scores)**

**Count Score Section**

**1 10 200 Sports**

**2 10 205 Sports**

**3 20 235 Sports**

**4 10 240 Sports**

**5 10 250 Sports**

**6 10 265 Regular**

**7 10 275 Regular**

**8 30 285 Sports**

**9 10 295 Regular**

**10 10 300 Regular**

**11 20 300 Sports**

**12 10 305 Sports**

**13 10 305 Regular**

**14 10 310 Regular**

**15 10 310 Sports**

**16 20 320 Regular**

**17 10 305 Regular**

**18 10 315 Sports**

**19 20 320 Regular**

**20 10 325 Regular**

**21 10 325 Sports**

**22 20 330 Regular**

**23 10 330 Sports**

**24 30 335 Sports**

**25 10 335 Regular**

**26 20 340 Regular**

**27 10 340 Sports**

**28 30 350 Regular**

**29 20 360 Regular**

**30 10 360 Sports**

**31 20 365 Regular**

**32 20 365 Sports**

**33 10 370 Sports**

**34 10 370 Regular**

**35 20 375 Regular**

**36 10 375 Sports**

**37 20 380 Regular**

**38 10 395 Sports**

**> names(scores)**

**[1] "Count" "Score" "Section"**

**>**

**> #Assigning names to categories#**

**> count<- scores[,c(1)]**

**> grades <- scores[,c(2)]**

**> section <- scores[,c(3)]**

**> print(section)**

**[1] "Sports" "Sports" "Sports" "Sports" "Sports" "Regular" "Regular" "Sports"**

**[9] "Regular" "Regular" "Sports" "Sports" "Regular" "Regular" "Sports" "Regular"**

**[17] "Regular" "Sports" "Regular" "Regular" "Sports" "Regular" "Sports" "Sports"**

**[25] "Regular" "Regular" "Sports" "Regular" "Regular" "Sports" "Regular" "Sports"**

**[33] "Sports" "Regular" "Regular" "Sports" "Regular" "Sports"**

**>**

**> #Creating subset#**

**> regular\_section <- subset(scores,section == "Regular")**

**> print(regular\_section)**

**Count Score Section**

**6 10 265 Regular**

**7 10 275 Regular**

**9 10 295 Regular**

**10 10 300 Regular**

**13 10 305 Regular**

**14 10 310 Regular**

**16 20 320 Regular**

**17 10 305 Regular**

**19 20 320 Regular**

**20 10 325 Regular**

**22 20 330 Regular**

**25 10 335 Regular**

**26 20 340 Regular**

**28 30 350 Regular**

**29 20 360 Regular**

**31 20 365 Regular**

**34 10 370 Regular**

**35 20 375 Regular**

**37 20 380 Regular**

**>**

**> sports\_section <- subset(scores, section == "Sports")**

**> print(sports\_section)**

**Count Score Section**

**1 10 200 Sports**

**2 10 205 Sports**

**3 20 235 Sports**

**4 10 240 Sports**

**5 10 250 Sports**

**8 30 285 Sports**

**11 20 300 Sports**

**12 10 305 Sports**

**15 10 310 Sports**

**18 10 315 Sports**

**21 10 325 Sports**

**23 10 330 Sports**

**24 30 335 Sports**

**27 10 340 Sports**

**30 10 360 Sports**

**32 20 365 Sports**

**33 10 370 Sports**

**36 10 375 Sports**

**38 10 395 Sports**

**> table(scores$Section)**

**Regular Sports**

**19 19**

**>**

**> #Plot with all points sharing spots#**

**> ggplot(scores,aes(grades, count)) +**

**+ geom\_point(aes(color = section)) +**

**+ labs(title = "Student Section Comparison",**

**+ subtitle = "Sports vs Regular Course Grades" ,**

**+ caption = "Scores Data")**

**>**

**> #Below is same plot with jittering and different shape, this ensures all points can be seen#**

**> ggplot(scores,aes(grades, count)) +**

**+ geom\_point(aes(color = section), position = "jitter", size = 3, shape = 17) +**

**+ labs(title = "Student Section Comparison",**

**+ subtitle = "Sports vs Regular Course Grades" ,**

**+ caption = "Scores Data")**

**A picture containing screenshot

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**A screenshot of a cell phone

Description automatically generated**