

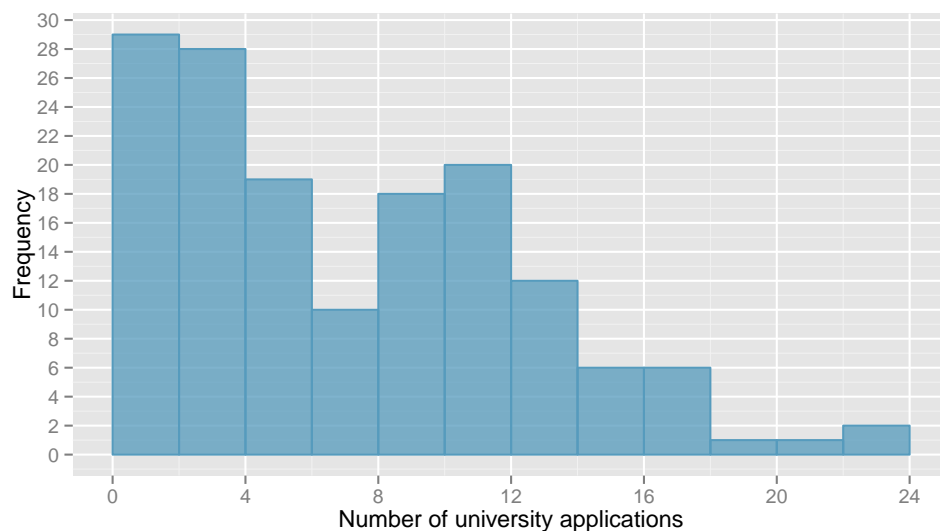
## Application exercise 1.2: Histogram to boxplot

Team name: \_\_\_\_\_

Lab section:      8:30      10:05      11:45      1:25      3:05

Write your responses in the spaces provided below. WRITE LEGIBLY and SHOW ALL WORK! Only one submission per team is required. One team will be randomly selected and their responses will be discussed and graded. Concise and coherent are best!

The histogram below shows the distribution of number of universities applied to by 152 students from Sta 101. All responses were non-negative whole numbers.



Sketch a box plot of this distribution on the scale provided below. Make sure to label your axes and try as best as you can to sketch to scale. Think about all components that make up the box plot first, calculate them, and then sketch.



*152 students:*

*median is the average of 76th and 77th observations  $\approx 6$*

*Q1 is the average of 38th and 39th observations  $\approx 3$*

*Q3 is the average of 114th and 115th observations  $\approx 11$*

*IQR  $\approx 11 - 3 = 8$*

*upper fence  $\approx 11 + (8 \times 1.5) = 23 \rightarrow$  no outliers on upper end*

*lower fence  $\approx 3 - (8 \times 1.5) = -9 \rightarrow$  no outliers on lower end*