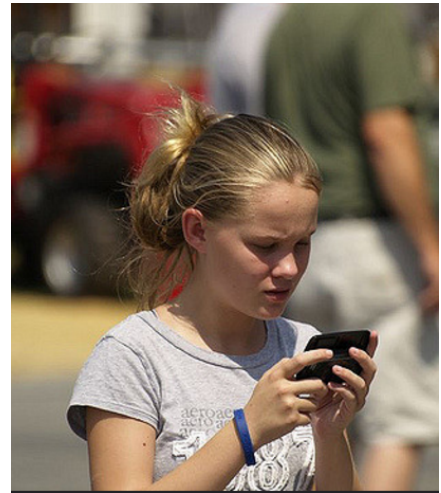
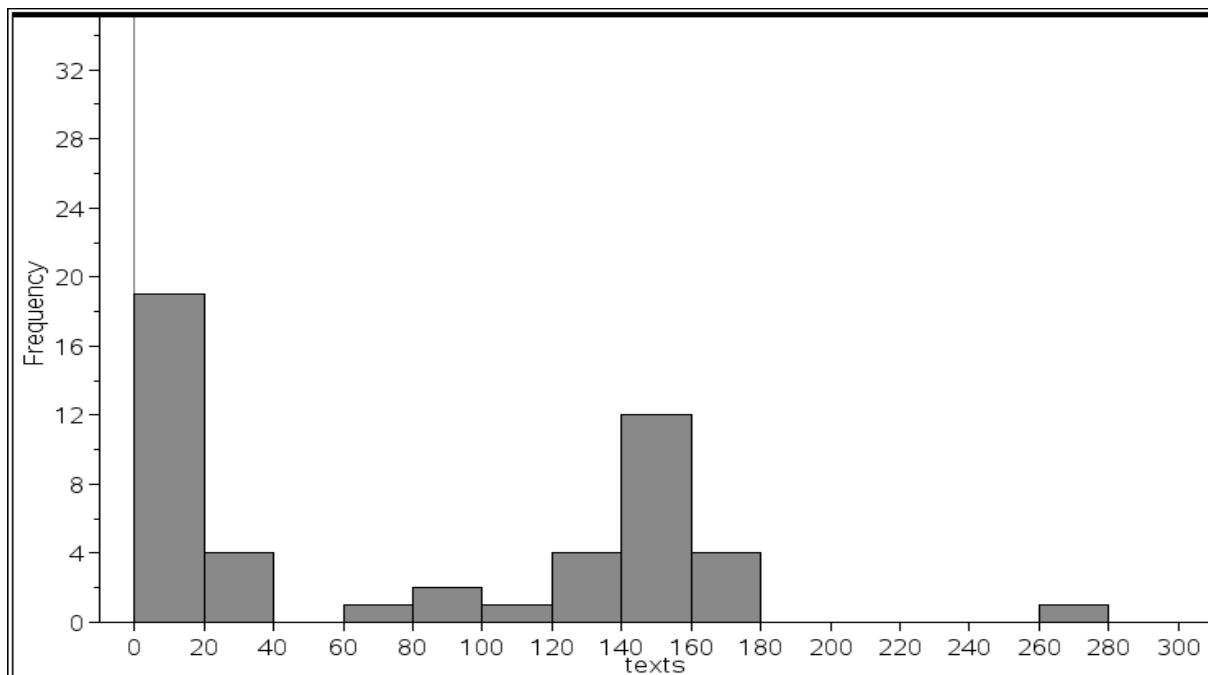


## 9.1 Texting by the Numbers

### *A Solidify Understanding Task*

Technology changes quickly and yet has a large impact on our lives. Recently, Rachel was busy chatting with her friends via text message when her mom was trying to also have a conversation with her. Afterward, they had a discussion about what is an appropriate number of texts to send each day. Since they could not agree, they decided to collect data on the number of texts people send on any given day. They each asked 24 of their friends the following question: “What is the average number of texts you SEND each day?” The data and histogram representing all 48 responses:

{0, 2, 3, 3, 5, 5, 5, 5, 5.5, 6, 6, 6, 10, 12, 13, 15, 15, 16, 20, 25, 35, 36, 70, 80, 85, 110, 130, 137, 138, 138, 140, 142, 143, 145, 150, 150, 150, 150, 150, 150, 150, 150, 155, 162, 164, 165, 175, 275}

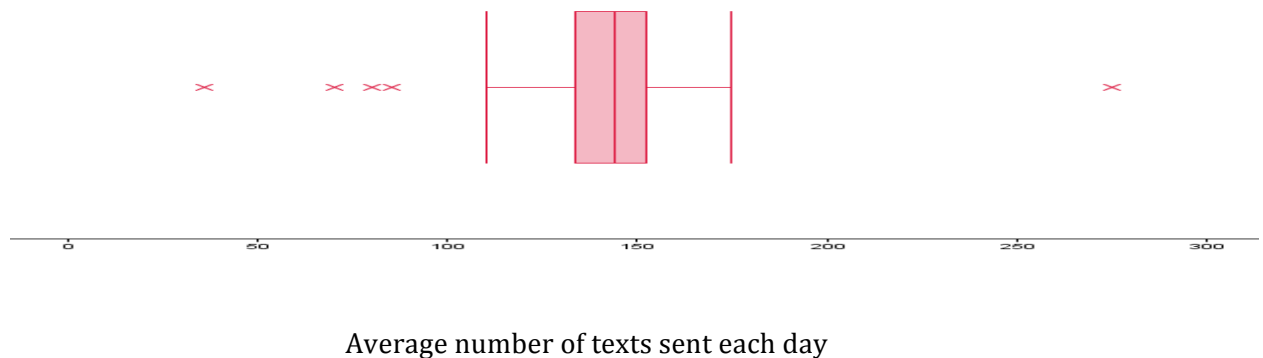


cc by <https://flic.kr/p/6XRm87>

Part I:

1. What information can you conclude based on the histogram above?
2. Represent the same data by creating a box plot above the histogram.
3. What story does the box plot tell? Describe the pros and cons of each representation (histogram and box plot). In other words, what information does each representation highlight? What information does each representation hide or obscure?

Part II: Prior to talking about the data with her mom, Rachel had created a box plot using her own data she collected and it looked quite different than when they combined their data.



4. Describe the data Rachel collected from her friends. What does this information tell you?
5. Compare the two box plots (Rachel's data vs all data).
6. Rachel wants to continue sending her normal number of texts (average of 100 per day) and her mom would like her to decrease this by half. Present an argument for each side, using mathematics to justify each person's request.