## Which One?



Let's explore the best uses of box plots, dot plots, and histograms.



## **Math Talk: What Is the Final Temperature?**

Mentally evaluate the final temperature in each situation.

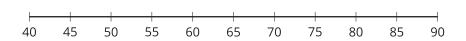
- The temperature was 20 degrees Celsius, and it dropped 18 degrees.
- The temperature was 20 degrees Celsius, and it dropped 20 degrees.
- The temperature was 20 degrees Celsius, and it dropped 25 degrees.
- The temperature was 20 degrees Celsius, and it dropped 33 degrees.



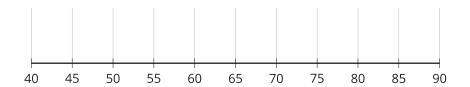
## 3.2 Best Representation

Use the class data to create a dot plot, box plot, and three histograms, each with different interval sizes.

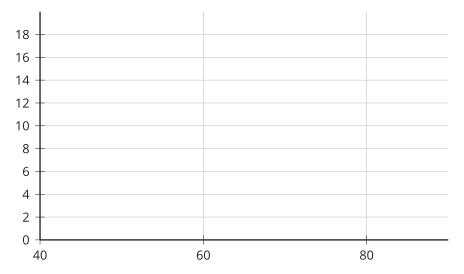
1. Create a dot plot.



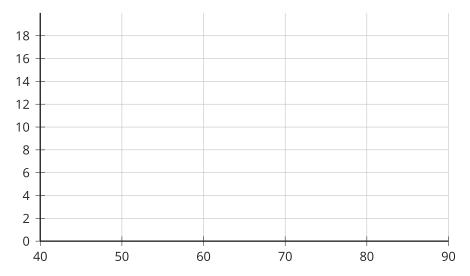
2. Create a box plot.



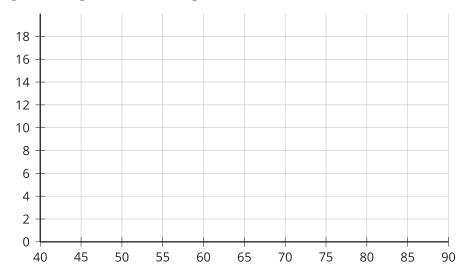
3. Create a histogram using intervals of length 20.



4. Create a histogram using intervals of length 10.



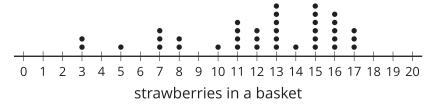
5. Create a histogram using intervals of length 5.

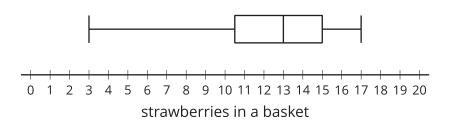


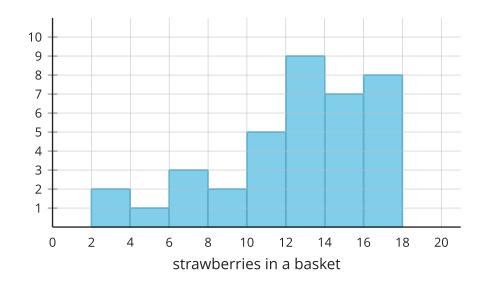
- 6. Which of these representations would you use if you wanted to continue analyzing the data?
- 7. Which of these representations would you use to discuss the spread of the data?
- 8. Which of these representations would you use to summarize your class's data: the dot plot, the box plot, or one of the histograms? Explain your reasoning.

## 3.3 Which One?

There are several baskets on a table, and each basket has a certain number of strawberries. Here are three data displays showing the number of strawberries in each basket.









- 1. Kiran makes these claims. For each claim, decide whether you agree or disagree. Explain your reasoning using at least one of the data displays.
  - a. There are 4 baskets that contain 11 strawberries.
  - b. The range of the number of strawberries in baskets can be found using any of the three data displays.
  - c. The number of baskets of strawberries can be found using only the dot plot.
  - d. The interquartile range can be found using the dot plot or box plot, but is easiest with the box plot.
  - e. The total number of strawberries in each of the baskets can be found only from the dot plot.
- 2. Complete the table to show the frequency of baskets containing strawberries in each range. Which representation did you use?

number of strawberries	frequency
0-6	
6–12	
12–18	