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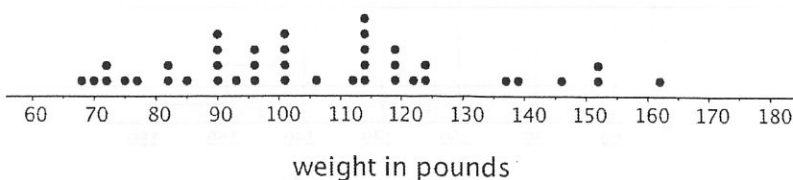
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Lesson 7: Histograms

Let's explore how histograms represent data sets.

7.1: Dog Show (Part 1)

Here is a dot plot showing the weights, in pounds, of 40 dogs at a dog show.



- Write two statistical questions that can be answered using the dot plot.
- What would you consider a typical weight for a dog at this dog show? Explain your reasoning.

Are you ready for more?

Ten more dogs joined the dog show. Half of them weighed more than 160 pounds but less than 180 pounds. The other half weighed more than 60 pounds but less than 80 pounds.

- Would the inclusion of these dogs change your estimate of a typical weight for dogs at this dog show? Explain or show your reasoning.
- Which data display—the dot plot or the histogram—would you consider more helpful for answering the previous question? Explain your reasoning.

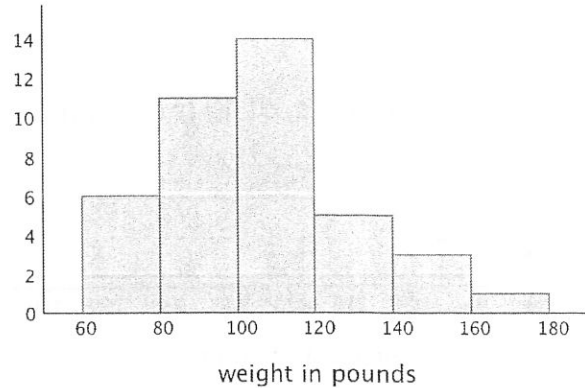
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7.2: Dog Show (Part 2)

Here is a **histogram** that shows a data set that you saw earlier.



Each bar includes the left-end value but not the right-end value. For example, the first bar represents dogs that weigh exactly 60 pounds but not those that are exactly 80 pounds.

1. Use the histogram to answer the following questions.
 - a. How many dogs weigh at least 100 pounds?
 - b. How many dogs weigh exactly 70 pounds?
 - c. How many dogs weigh at least 120 and less than 160 pounds?
 - d. How much does the heaviest dog at the show weigh?
 - e. What would you consider a typical weight for a dog at this dog show? Explain your reasoning.

Be ready to

2. Discuss with a partner:
 - If you were to use the dot plot to answer the same five questions you just answered, how would your answers be different?
 - How are the histogram and the dot plot alike? How are they different?