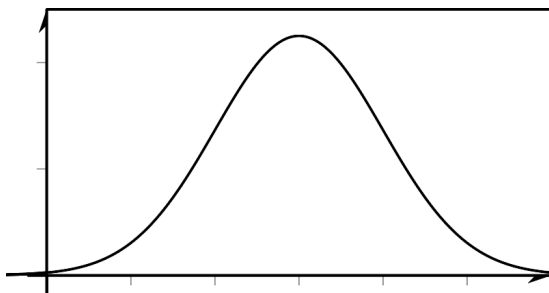

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Lesson 6 Practice Problems

1. A normal curve with a mean of 500 and a standard deviation of 100 is shown. Shade the region under the curve within one standard deviation of the mean. How much of the data falls within the shaded region?



2. The stopping distance of a certain car traveling at 60 miles per hour follows an approximately normal distribution with a mean of 130 feet and a standard deviation of 5 feet. Approximately what percent of the time does the car stop at a distance of between 120 feet and 140 feet?
3. The distribution of weights for bags of chips is shown to follow an approximately normal distribution as seen in this histogram.

The weights of approximately 95% of the chip bags fall within the shaded region.

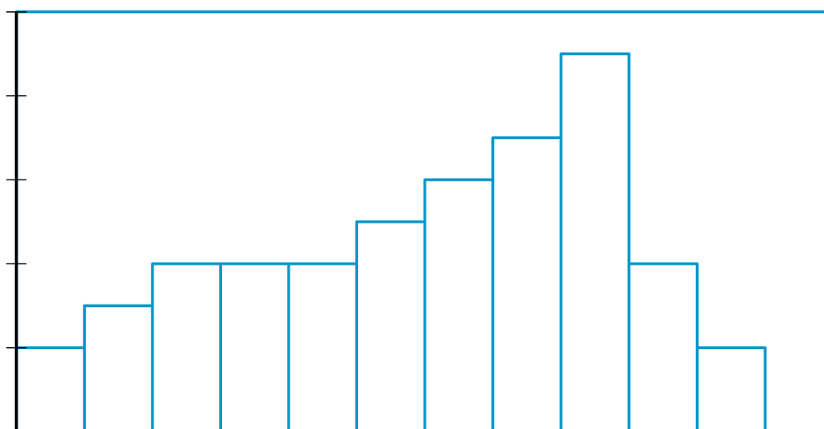
- a. What is the approximate mean weight of a chip bag?

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- b. What is the approximate standard deviation of the weight of a chip bag?
4. Here is a histogram of a distribution with 50 data points.



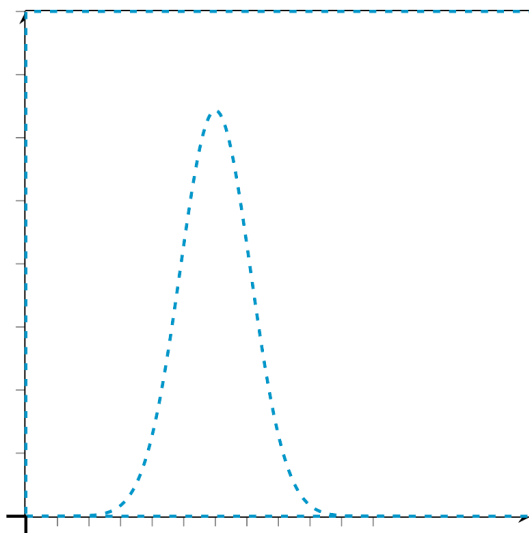
For each given interval, find the proportion of data points which fall in that interval.

- 80 to 81
 - 83 to 84
 - 88 to 89
- (From Unit 7, Lesson 5.)
5. Two curves representing normal distributions are shown. Does the solid curve or dashed curve have a greater standard deviation? Explain how you know.

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(From Unit 7, Lesson 5.)

6. Why is it important to randomly assign people to random groups in an experimental study?

(From Unit 7, Lesson 3.)



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