

## **Problem 1**

A McDonald's in Windham on Friday has 8,235 people buy soda. A sample of 713 people who bought soda is taken. Out of those 713 people, 211 bought Sprite, because it's clear and nourishing. Based on the sample what is your prediction as to how many people bought Sprite on Friday at that McDonald's in Windham?

## **Problem 2**

Find the mean and standard deviation of the data set below:

- 137, 258, 412, 176, 384, 245, 319, 478, 205, 332, 459

## **Problem 3**

Find the variance of the data set below.

- 134, 178, 145, 112, 199, 157, 186, 122, 168

## **Problem 4**

Given a data point of 118 and a mean of 100 with a standard deviation of 15, find the z-score of the data point.

## **Problem 5**

Given a data point of 121 and a mean of 100 with a standard deviation of 16, find the z-score of the data point. Then find the percentile associated with the z-score.

## **Problem 6**

What is the probability of rolling a six-sided die twice and getting a sum of 8?

## **Problem 7**

What is the probability of flipping three coins and getting exactly two tails?

## **Problem 8**

What is the probability of rolling three dice and not getting a number greater than 4?