



Algebra II Journal
Module 3: Standard Deviation
Plinko

This journal belongs to:

Play the Plinko game 50-100 times. After each trial, record your winning value in the table below by placing an X above the corresponding prize value. (When a winning value repeats, place the X above the other Xs in that column.) Begin at the bottom row.

A -100	B -500	C- 1,000	D- 0	E- 10,000	F-0	G- 1,000	H-500	I-100

Algebra II Journal: Reflection 2

Respond to the following reflection questions and submit to your teacher.

Construct a histogram for the Vice Presidents of the United States data.

Calculate the mean and standard deviation for the vice presidents' ages at inauguration. Use what you know about mean (μ) and standard deviation (σ) and data distributions to justify why the ages of the vice presidents form a normal distribution.

What percentage of the ages is within one standard deviation of the mean (-1σ and $+1\sigma$)? What is this range of ages?

How close does the data fit the 95.44% rule, where 95.44% of the data falls within two standard deviations of the mean ($\mu \pm 2\sigma$)? How close does the data fit the 99.74% rule, where 99.74% of the data falls within three standard deviations of the mean ($\mu \pm 3\sigma$)?

Algebra II Journal: Reflection 3

In this lesson, you explored normal distributions and compared them to skewed distributions. You discovered population percentages under the normal curve.

Respond to the following reflection question and submit to your teacher.

In the presidential data for “Number of Years Served,” the distribution of the data turned out to be skewed to the right. What would happen to the distribution if Theodore Roosevelt was removed from the data? Use what you have learned about mean, standard deviation, normal distributions and the 68-95-99.7 Rule to justify your answer.