



Solutions

Algebra II Journal
Module 3: Standard Deviation
Just How Normal Are You?

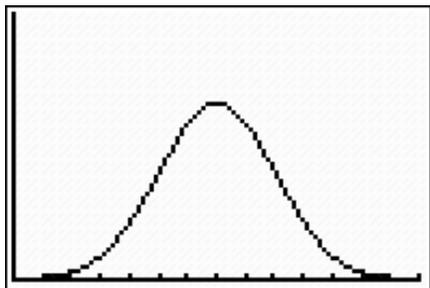
This journal belongs to:

Module 3: Just How Normal Are You?

Algebra II Journal: Reflection 2

Using the graph paper below or your graphing calculator, sketch the graph of the normal distribution of number cube rolls.

Answer:



In what range do the middle 95% of the rolls lie?

Answer:

Between 3 and 11

About what percent of the rolls will have a sum greater than 9?

Answer:

Approximately 15.87%

Module 3: Just How Normal Are You?

Algebra II Journal: Reflection 3

In this lesson, you used the mean and standard deviation of a data set to fit the data to a normal distribution and to estimate percentages using the normal distribution.

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

Why are normal distributions important to statistics?

Answer:

Answers may vary. Sample answer: Normal distributions can be used to describe the distribution and variability of data. They can be used to make predictions and identify outliers in data. Normal distributions can help to determine percentiles. They can identify faulty research and identify when data samples do not follow the “norm.”

Why do some data sets follow normal distributions and some do not? Refer to the presidents' weight data to support your answer.

Answer:

Answers may vary. Sample answer: Some data sets will contain outliers, or extreme values. These values pull the mean and skew the data away from a normal distribution.