

AP Statistics Summer Assignment

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I. Using the TI-Nspire

The primary purpose of this summer assignment is for you to get familiar with the TI-Nspire graphing calculator. It will be our primary technological instrument and you will be required to use one on a daily basis. I have created a series of videos to get you familiar with the basic functions of the calculator and a couple of techniques that you will be required to do during class. Watch each video in sequence, then complete the problems below. (Videos can be found on my website: www.maestasmath.com)

Video 1: Basics of the TI-Nspire

Video 2: Using the Calculator Tab in the TI-Nspire

Video 3: Using the Spreadsheet Tab in the TI-Nspire

Video 4: Using the Data and Statistics Tab in the TI-Nspire

Video 5: RandInt in the TI-Nspire

Video 6: Determining One-Variable Statistics in the TI-Nspire

II. Problem Set

In the book, “Marvel Avengers: The Ultimate Character Guide”, (one of my son’s favorites), there are 228 heroes and villains with links to the Avengers. Each hero or villain has a short biography and is given a power rating from 1 (lowest) to 7 (highest) on the following categories: Energy Projection, Strength, Durability, Fighting Skills, Intelligence, and Speed. Below is a random sample of 20 heroes/villains from the book and their “Fighting Skill” power rating.

	Slingshot	Abomination	Jessica Jones	Mantis	Flatman
Power Rating	4	2	3	3	5

	Immortus	Ex Nihilo	Power Man	Hyperion	Trickshot
Power Rating	1	2	5	4	5

	Melter	Psyklop	Abyss	Valkyrie	Diamondback
Power Rating	5	3	2	5	4

	Hulkling	Starfox	Iron Fist	Veil	Marrina
Power Rating	3	3	6	3	3

Problem 1: Using the TI-Nspire, determine each of the following statistics:

$$\bar{x} =$$

$$s_x =$$

$$Q_1 =$$

$$\text{Median} =$$

$$\text{Range} =$$

$$Q_3 =$$

Problem 2: Use the TI-Nspire to construct a relative frequency histogram and a box-plot for these data. Be sure to label your axes in context.