Common Core Math 1
One-Variable Data
Measures of Center and the Standard Deviation

Name _____
Date _____

1) A visitor from the star Alpha Centauri has selected you to provide her with information about our solar system. She asks about the length of a typical day in our solar system. Study the following table.

Planet	Approximate Length of a Day in Earth Hours
Mercury	1416
Venus	5832
Earth	24
Mars	24.5
Jupiter	10
Saturn	11
Uranus	22
Neptune	16

a) Compute the mean length of a day in our solar system in hours.
b) How many Earth days is this?
c) Find the median length of a day in our solar system.
d) Do you think it is better to give your visitor the mean length of a day or the median length of a day? Explain.
e) Are you happy about giving your visitor one single number? Why or why not?
f) What other information could you give the visitor from Alpha Centauri to help describe the length of a day in our solar system?

2) Superbowl XLIII featured 2 of the NFL's most unknown offensive linemen. The data sets give the name of the players and their weights (lbs).

Cardinals		Steelers	
Mike Gandy	316	Max Starks	345
Reggie Wells	308	Chris Kemoeata	344
Lyle Sendlein	300	Justin Hartwig	312
Duece Luti	332	Darnell Stapelton	305
Levi Brown	322	Willie Colon	315

a) Find the mean and median weights of both the Steelers' and Cardinals' offensive lines.
b) Calculate the standard deviation of the weights of both the Steelers' and Cardinals' offensive lines.
c) Compare the Steelers' and the Cardinals' offensive lines. How are they different? How are they alike?
d) Assume that the Cardinals' offensive linemen each put on 15 pounds. Calculate the mean, median, and standard deviation for this new group of data.
e) Which statistical values changed compared to the original group of Cardinals' linesmen? Which stayed the same? Why do you think this happened?