

1. Draw a **dot plot** of the times that five students studied for a test if the mean time they studied was two hours and the MAD was zero hours.

2. Suppose the times that five students studied for a test is as follows:

Student	Aria	Ben	Chloe	Dellan	Emma
Time (hrs.)	1.5	2	2	2.5	2

Michelle said that the MAD for this data set is 0 because the dot plot is balanced around 2. Without doing any calculation, do you agree with Michelle? Why or why not?

3. Rewrite each of the following subtraction problems as an equivalent **addition** problem and **evaluate**:

a)	$5 - 3 =$	$5 + -3 =$	
b)	$-5 - 3 =$		
c)	$5 - (-3) =$		
d)	$-5 - (-3) =$		
e)	$-502 - 317 =$		

4. Suppose that the number of text messages eight students receive on a typical day is as follows:

Student	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
Texts	42	56	35	70	56	50	65	50

- a. Draw a **dot plot** for the number of text messages received on a typical day by these eight students.
- b. Find the **mean** number of text messages these eight students receive on a typical day.
- c. **Find the MAD** number of text messages and explain its meaning using the words of this problem.

Student	A	B	C	D	E	F	G	H
Texts	42	56	35	70	56	50	65	50
Absolute Deviation								

MAD _____

It is typical for the number of texts to be _____ above or below _____.

- d. Describe the **shape** of this data distribution.
- e. Suppose that in the original data set, Student C receives an additional five more text messages per day, and Student D receives five fewer messages per day.
- Without doing any calculation, does the mean for the new data set stay the same, increase, or decrease as compared to the original mean? Explain your reasoning.
 - Without doing any calculation, does the MAD for the new data set stay the same, increase, or decrease as compared to the original MAD? Explain your reasoning.