

Mean Absolute Deviation

1. Suppose that seven students have the following numbers of pets: 1,1,1, 2, 4, 4, 8.

a) The mean number of pets for these seven students is 3 pets. Use the following table to find the MAD for this distribution of number of pets.

Student	Number of Pets	Deviation from the Mean (distance and direction)	Absolute Deviation (distance from the mean)
1	1		
2	1		
3	1		
4	2		
5	4		
6	4		
7	8		
Sum			

b) Explain in words what the MAD means for this data set.

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Student	Number of Pets	Deviation from the Mean (distance and direction)	Absolute Deviation (distance from the mean)
1	1	$ 1 - 3 $	2
2	1	$ 1 - 3 $	2
3	1	$ 1 - 3 $	2
4	2	$ 2 - 3 $	1
5	4	$ 4 - 3 $	1
6	4	$ 4 - 3 $	1
7	8	$ 8 - 3 $	5
Sum			14

$$\frac{14}{7} = 2$$

The MAD number of pets is 2.

b) Explain in words what the MAD means for this data set.

On average, the number of pets for these students differs by 2 from the mean of 3 pets.

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