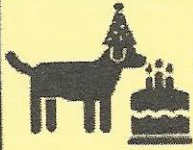


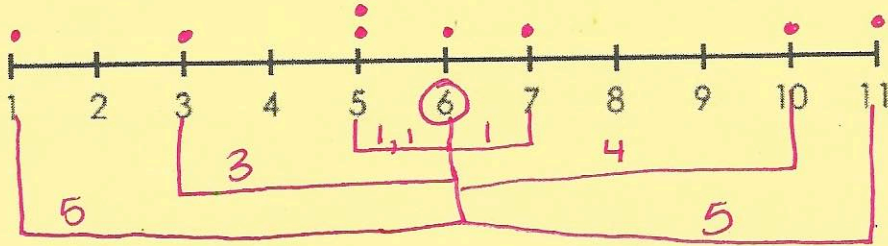
# 9.5 Mean Absolute Deviation

an average of how much data values differ from the mean.



I surveyed my neighbors to find out the age of their pet dogs. In years, the answers were:

5, 3, 6, 1, 10, 5, 7, 11



## mean absolute deviation

A. Calculate the mean.

$$5 + 3 + 6 + 1 + 10 + 5 + 7 + 11 = \frac{48}{8} = 6$$

B. Calculate the deviation of each element in the set.

5	3	6	1	10	5	7	11
6	6	6	6	6	6	6	6
1	3	0	5	4	1	1	5

← write ages

← write the mean

C. Calculate the mean of the absolute deviations.

$$1 + 3 + 0 + 5 + 4 + 1 + 1 + 5 = \frac{20}{8} = 2.5$$

$$MAD = 2.5$$

Interpret: The average distance between the ages and the mean is 2.5 years.