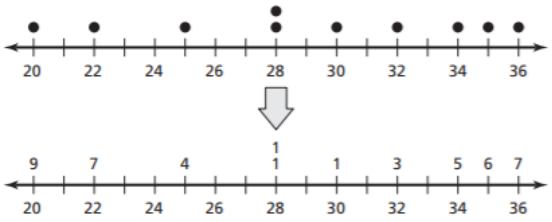
9.5 BOOK WORK ANSWERS WITH WORK PG. 422-423 #5-9 ALL

5.

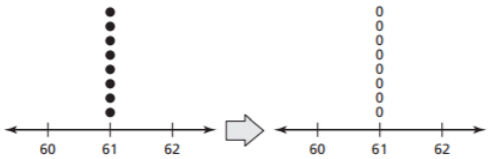
$$\text{Mean} = \frac{25 + 28 + 28 + 35 + 20 + 34 + 22 + 30 + 32 + 36}{10}$$
$$= \frac{290}{10}$$
$$= 29$$



The sum of the distances is $9 + 7 + 4 + 1 + 1 + 1 + 3 + 5 + 6 + 7 = 44$. The mean absolute deviation is $\frac{44}{10} = 4.4$. The data values differ from the mean by an average of \$4.40.

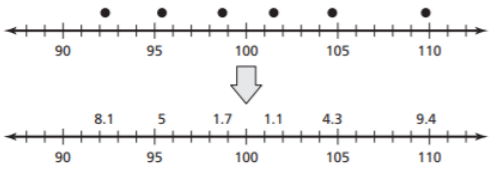
6. Note: See solution of Exercise 1.

$$\text{Mean} = \frac{61 + 61 + 61 + 61 + 61 + 61 + 61 + 61}{8}$$
$$= \frac{488}{8}$$
$$= 61$$



The sum of the distances is 0. The mean absolute deviation is 0. The heights are the same, so absolute deviation is 0.

7. $$\text{Mean} = \frac{101.5 + 98.7 + 95.4 + 92.3 + 109.8 + 104.7}{6}$$
$$= \frac{602.4}{6}$$
$$= 100.4$$

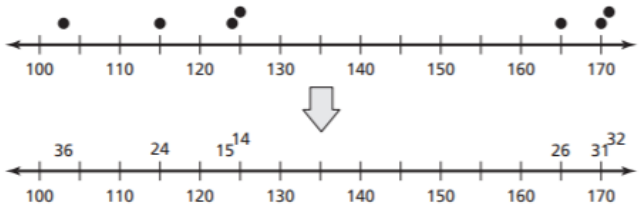


The sum of the distances is $8.1 + 5 + 1.7 + 1.1 + 4.3 + 9.4 = 29.6$. The mean absolute deviation is $\frac{29.6}{6} \approx 4.9$. The data values differ from the mean by an average of approximately 4.9 thousand people, or 4900 people.

8. Mean $= \dfrac{103 + 171 + 115 + 165 + 124 + 170 + 125}{7}$

$= \dfrac{973}{7}$

$= 139$



The sum of the distances is $36 + 24 + 15 + 14 + 26 + 31 + 32 = 178$. The mean absolute deviation is $\dfrac{178}{7} \approx 25.4$. The data values differ from the mean by an average of approximately 25.4, or about 25 visitors.

9. There are 6 data values in the set, so the MAD should be divided by 6 instead of 5. List all the distances when calculating the MAD, even if a value is zero.

$$\text{MAD} = \frac{3 + 2 + 0 + 6 + 4 + 3}{6} = 3$$

So, the values differ from the mean by an average of 3.