

Mean Deviation – Supplemental Questions with Solutions

1. There are eight students on a school bus in various grades. Their ages are:

8 7 12 15 13 16 13 12

What is the mean deviation of their ages?

$$\bar{x} = \frac{8+7+12+15+13+16+13+12}{8} = 12$$

$$|8-12| = 4$$

$$|7-12| = 5$$

$$|12-12| = 0$$

$$|15-12| = 3$$

$$|13-12| = 1$$

$$|16-12| = 4$$

$$|13-12| = 1$$

$$|12-12| = 0$$

$$m.d. = \frac{4+5+0+3+1+4+1+0}{8}$$

$$m.d. = 2.25$$

2. A middle-aged teacher decides to start working out every day but is not very consistent with regards to how long each workout is. The following are the times (in minutes) of the length of these workouts. What is the mean deviation of the workout times?

20 15 45 90 35

$$\bar{x} = \frac{20+15+45+90+35}{5} = 41$$

$$|20 - 41| = 21$$

$$|15 - 41| = 26$$

$$|45 - 41| = 4$$

$$|90 - 41| = 49$$

$$|35 - 41| = 6$$

$$\frac{21+26+4+49+6}{5}$$

$$m.d. = 21.2$$