

Homework: Measures of Spread - Key

1. Find the range of the following numbers:

5, 7, 2, 8, 12, 35, 42, 80

Ans: 78

2. Find the sample standard deviation of the following data: 1, 5, 7, 11 (by hand)

Ans: 4.16

3. Find the sample standard deviation of the following data:

80, 82, 85, 87, 91, 95, 103, 112

(round to 2 decimal places)

Ans: 11.01

4. Find the sample standard deviation of the following data:

17, 19, 21, 31, 42, 55, 58, 105

(round to 2 decimal places)

Ans: 29.5

5. Find the sample variance of the following data:

88, 91, 95, 103, 115, 207, 315

(round to 2 decimal places)

Ans: 7345.48

6. Find the sample variance of the following data:

1, 5, 7, 7, 9, 13, 15, 21, 35, 42

(round to 2 decimal places)

Ans: 180.72

7. Find the population standard deviation of the following data:

8, 13, 14, 17, 25, 35, 82, 113

(round to 2 decimal places)

Ans: 35.85

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8. Find the population standard deviation of the following data:

25, 31, 42, 88, 105, 110, 231

(round to 2 decimal places)

Ans: 66.03

9. Find the population variance of the following data:

12, 32, 40, 80, 120, 123, 152

(round to 2 decimal places)

2451.55

10. Find the population variance of the following data:

500, 501, 510, 601, 715, 805, 913

(round to 2 decimal places)

Ans: 23445.35

11. Given the following sample data:

2, 13, 21, 35, 42, 51, 80, 88

Find the coefficient of variation

(round to 2 decimal places)

Ans: 73.82%

12. The weight, in grams, of the pair of kidneys in adult males between the ages of 40 and 49 has a bell-shaped distribution with a mean of 300 grams and a standard deviation of 20 grams.

(a) About 95% of kidney pairs will be between what weights?

(b) What percentage of kidney pairs weighs between 280 and 340 grams?

(c) What percentage of kidney pairs weighs less than 260 grams or more than 360 grams?

(d) What percentage of kidney pairs weighs between 240 grams and 300 grams?

Ans: 260-340, 81.5%, 2.65%, 49.85%