The Simplest Way to Standard Deviation

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do not panic.
2. Line your data (example: test scores) up in numerical order. This makes your work a little easier. {50, 75, 25, 100} = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the mean (average) of your data set by adding each number and dividing it by the number (4) of scores. ­­­­­­­­­­­­­­­­­

\_\_\_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_\_/4= \_\_\_\_\_\_\_\_\_\_\_\_\_

1. Take each score and subtract the mean from it. Negative numbers are ok; do not panic!

|  |  |  |
| --- | --- | --- |
| Score | Mean (average) | Result 1 |
| 25 |  |  |
| 50 |  |  |
| 75 |  |  |
| 100 |  |  |

1. Square each number in the “Result” column. Squaring means we multiply the number by itself (2 squared= 2 x 2; 3 squared= 3x3). If the number is negative, squaring it will turn it into a positive. Do not panic. It is ok.

|  |  |  |
| --- | --- | --- |
| Result 1 | X itself (positively) | Result 2 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |
| --- |
| Result 2 |
|  + |
| + |
| + |
| + |
| Result 3 = |

1. Take all of the numbers in the “Result 2” column (the squares) and add them together.
2. Take the “Result 3” number and divide by the number of scores.

|  |  |  |
| --- | --- | --- |
| Result 3 | Divide by # of scores | Result 4 |
|  | 4 |  **=** |

1. Find the $√$ square root (what number multiplied by itself = Result 4) of “Result 4” and…
2. THAT is your standard deviation!

The Simplest Way to Standard Deviation

Name: \_\_\_\_\_\_\_\_\_\_KEY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do not panic.
2. Line your data (example: test scores) up in numerical order. This makes your work a little easier. {50, 75, 25, 100} = 25, 50, 75, 100
3. Find the mean (average) of your data set by adding each number and dividing it by the number (4) of scores. ­­­­­­­­­­­­­­­­­

\_\_\_\_\_25\_\_\_\_+\_\_\_\_50\_\_\_\_\_\_+\_\_\_\_75\_\_\_\_\_+\_\_\_\_\_100\_\_\_\_\_\_=\_\_\_\_\_250\_\_\_\_\_\_/4= \_\_\_\_62.5\_\_\_\_\_\_\_\_\_

1. Take each score and subtract the mean from it. Negative numbers are ok; do not panic!

|  |  |  |
| --- | --- | --- |
| Score | Subtract the Mean (average) | Result 1 |
| 25 | - 62.5 | -37.5 |
| 50 | - 62.5 | -12.5 |
| 75 | - 62.5 | 12.5 |
| 100 | - 62.5 | 37.5 |

1. Square each number in the “Result” column. Squaring means we multiply the number by itself (2 squared= 2 x 2; 3 squared= 3x3). If the number is negative, squaring it will turn it into a positive. Do not panic. It is ok.

|  |  |  |
| --- | --- | --- |
| Result 1 | X itself (positively) | Result 2 |
| -37.5 | 37.5 | 1, 406.25 |
| -12.5 | 12.5 | 156.25 |
| 12.5 | 12.5 | 156.25 |
| 37.5 | 37.5 | 1, 406.25 |

|  |
| --- |
| Result 2 |
| 1, 406.25 |
| 156.25 |
| 156.25 |
| 1, 406.25 |
| Result 3 = 3, 125 |

1. Take all of the numbers in the “Result 2” column (the squares) and add them together.
2. Take the “Result 3” number and divide by the number of scores.

|  |  |  |
| --- | --- | --- |
| Result 3 | Divide by # of scores | Result 4 |
| 3, 125 | 4 |  **=** 781.25 |

1. Find the $√$ square root (what number multiplied by itself = Result 4) of “Result 4” and…

$\sqrt{781.25 }$ = 27.95

1. THAT is your standard deviation! 27.95