

Worksheet: Calculating population parameters in Excel

This worksheet guides you through calculating variance and standard deviation in Excel. We have completed the worksheet for an example set of data; in this case the data represents 20 scores from a test where the maximum score was 100.

Step 1. Enter the following values into a column in Excel, taking care to leave the first cell empty.	
X ₁	48
X ₂	67
X ₃	95
X ₄	99
X ₅	66
X ₆	100
X ₇	75
X ₈	34
X ₉	80
X ₁₀	85
X ₁₁	60
X ₁₂	100
X ₁₃	95
X ₁₄	60
X ₁₅	70
X ₁₆	50
X ₁₇	86
X ₁₈	90
X ₁₉	75
X ₂₀	84

Step 2. Select cell a1. Enter the name for the data you are using. 'Test' will do fine.

Step 3. Note the first and last cell which contain data. For example, if you started entering data in the cell below a1, your first data cell will be a2. If you entered 20 values, your last data cell will be a21.

First cell = _____

Last cell = _____

Step 4. In Excel, expressing a range of cells takes the format [first cell]:[last cell]. Describe the range of cells in which you have entered data:

_____ : _____

This is your range.

Step 5. Highlight the cell the cell in which you want the standard deviation to appear. Then type `=stdev.p(your range)` straight into the function bar and hit Enter. Here, “your range” is the result of Step 4. For example, if you had entered data into cells A2 to A21, you would type:

`=stdev.p(a2:a21)`

Alternatively, go to the menu Insert -> Function ... and select the *stdev.p* function in the Formula Builder window. Click ‘Insert Function’, then enter the range of cells (the result of Step 4) you want included in the calculation. Then click ‘Done’.

Step 6. Highlight the cell in which you want the variance to appear; then type `=var.p(your range)` (directly into the function bar and hit Enter. Here, “your range” is the result of Step 4. For example, if you had entered data into cells A2 to A21, you would type:

`=var.p(a2:a21)`

Alternatively, go to the menu Insert -> Function ... and select the *var.p* function in the Formula Builder window. Click ‘Insert Function’, then enter the range of cells you want included in the calculation. Then click ‘Done’.