

# EXAMPLE - Statistical Functions Sample Method

This example shows some of the statistical functions that use the sample method of computation. These include:

- **STDEVSAMP** - computes standard deviation using the sample method. See *STDEVSAMP Function*.
- **VARSAAMP** - computes variance using the sample method. See *VARSAAMP Function*.
- **STDEVSAMPIF** - computes standard deviation based on a condition and using the sample method. See *STDEVSAMPIF Function*.
- **VARSAMPIF** - computes standard deviation based on a condition and using the sample method. See *VARSAMPIF Function*.

## Source:

Students took tests on three consecutive Saturdays:

Student	Date	Score
Andrew	11/9/19	81
Bella	11/9/19	84
Christina	11/9/19	79
David	11/9/19	64
Ellen	11/9/19	61
Fred	11/9/19	63
Andrew	11/16/19	73
Bella	11/16/19	88
Christina	11/16/19	78
David	11/16/19	67
Ellen	11/16/19	87
Fred	11/16/19	90
Andrew	11/23/19	76
Bella	11/23/19	93
Christina	11/23/19	81
David	11/23/19	97
Ellen	11/23/19	97
Fred	11/23/19	91

## Transformation:

You can use the following transformations to calculate standard deviation and variance across all dates using the sample method. Each computation has been rounded to three digits.

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	<code>round(stdevsamp(Score), 3)</code>

<b>Parameter: New column name</b>	'stdevSamp'
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<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	round(varsamp(Score), 3)
<b>Parameter: New column name</b>	'varSamp'

You can use the following to limit the previous statistical computations to the last two Saturdays of testing:

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	round(stdevsampilf(Score, Date != '11\9\2019'), 3)
<b>Parameter: New column name</b>	'stdevSampIf'

<b>Transformation Name</b>	New formula
<b>Parameter: Formula type</b>	Single row formula
<b>Parameter: Formula</b>	round(varsampilf(Score, Date != '11\9\2019'), 3)
<b>Parameter: New column name</b>	'varSampIf'

## Results:

Student	Date	Score	varSampIf	stdevSampIf	varSamp	stdevSamp
Andrew	11/9/19	81	94.515	9.722	131.673	11.475
Bella	11/9/19	84	94.515	9.722	131.673	11.475
Christina	11/9/19	79	94.515	9.722	131.673	11.475
David	11/9/19	64	94.515	9.722	131.673	11.475
Ellen	11/9/19	61	94.515	9.722	131.673	11.475
Fred	11/9/19	63	94.515	9.722	131.673	11.475
Andrew	11/16/19	73	94.515	9.722	131.673	11.475
Bella	11/16/19	88	94.515	9.722	131.673	11.475
Christina	11/16/19	78	94.515	9.722	131.673	11.475
David	11/16/19	67	94.515	9.722	131.673	11.475
Ellen	11/16/19	87	94.515	9.722	131.673	11.475
Fred	11/16/19	90	94.515	9.722	131.673	11.475
Andrew	11/23/19	76	94.515	9.722	131.673	11.475
Bella	11/23/19	93	94.515	9.722	131.673	11.475
Christina	11/23/19	81	94.515	9.722	131.673	11.475

David	11/23/19	97	94.515	9.722	131.673	11.475
Ellen	11/23/19	97	94.515	9.722	131.673	11.475
Fred	11/23/19	91	94.515	9.722	131.673	11.475