

# Command Reference: TableTimeSeriesMath()

## Perform simple math operation on time series using table input

Version 09.09.01, 2010-10-18

The `TableTimeSeriesMath()` command performs a simple math operation on time series using values from a table. For example, a table that is populated by the `CalculateTimeSeriesStatistic()` command or `ReadTableFromDelimitedFile()` could be used to modify time series data. See also the `TableMath()` command.

The table value is determined by matching the time series identifier (formatted according to the `TableTSIDFormat` parameter) with the TSID value in the table column specified by the `TableTSIDColumn` parameter. If necessary, use the `ManipulateTableString()` command to generate an identifier column in the table that allows that match.

The following dialog is used to edit the command and illustrates the syntax of the command.

**Edit TableTimeSeriesMath() Command**

Perform a simple math operation on time series using matching input from a table.  
For example, multiply values in a time series by a value from a table.  
The table value is determined from a row with a matching time series identifier (TSID) and by specifying the column from which to get a value.

TS list:  Optional - indicates the time series to process (default=AllTS).

TSID (for TSList=AllMatchingTSID):

EnsembleID (for TSList=EnsembleID):

Math operator:  Required - math calculation to perform on input.

Table ID:  Required - table to process.

Table TSID column:  Required - column name for TSID.

Format of TSID:  Insert:  Optional - use %L for location, etc. (default=alias or TSID).

Table input column:  Required - column name for table input.

If table input is blank:  Optional - action if table input value is blank (default=Warn).

If time series list is empty:  Optional - action if time series list is empty (default=Fail).

Command:  
`TableTimeSeriesMath(TSList=AllMatchingTSID, TSID="ts1", Operator="*",  
TableID="Table1", TableTSIDColumn="TSID", TableTSIDFormat="%L", TableI  
nputColumn="DataValue")`

TableTimeSeriesMath

### TableTimeSeriesMath() Command Editor

The command syntax is as follows:

```
TableTimeSeriesMath(Parameter=Value,...)
```

### Command Parameters

Parameter	Description	Default
TSList	Indicates the list of time series to be processed, one of:	AllTS

Parameter	Description	Default
	<ul style="list-style-type: none"> <li>AllMatchingTSID – all time series that match the TSID (single TSID or TSID with wildcards).</li> <li>AllTS – all time series before the command.</li> <li>EnsembleID – all time series in the ensemble.</li> <li>FirstMatchingTSID – the first time series that matches the TSID (single TSID or TSID with wildcards).</li> <li>LastMatchingTSID – the last time series that matches the TSID (single TSID or TSID with wildcards).</li> <li>SelectedTS – the time series selected with the SelectTimeSeries() command.</li> </ul>	
TSID	The time series identifier or alias for the time series to be processed, using the * wildcard character to match multiple time series.	Required if TSList=*TSID.
EnsembleID	The ensemble to be processed, if processing an ensemble.	Required if TSList=EnsembleID.
Operator	The operator to be applied to the time series and table input.	None – must be specified.
TableID	Identifier for table that provides input.	None – must be specified.
TableTSIDColumn	Table column name that is used to match the time series identifier for processing.	None – must be specified.
TableTSIDFormat	The specification to format the time series identifier to match the TSID column. Use the format choices and other characters to define a unique identifier.	Time series alias if available, or otherwise the time series identifier.
TableInput Column	Table column name to retrieve the table value.	None – must be specified.
IfTableInputIsBlank	Action if time table input is blank during processing (no value to operate on).	Warn
IfTSListIsEmpty	Action if time series list is empty.	Fail

The delimited file corresponding to that used in the above dialog example is shown below. In this example, the time series identifiers have location parts with values `ts1` and `ts2`.

```
# Simple test data
"TSID", "DataValue"
ts1,2
ts2,3
```