How to Determine Leap Year

This rule model determines if a year is a leap year

LeapYear | GetDateInt | GetDateString

Rules

	Conditions	...	1	2	3	4
1	Calculation.dateYear.mod (4) = 0	...	F	T	T	T
2	Calculation.dateYear.mod (100) = 0	...	-	F	T	T
3	Calculation.dateYear.mod (400) = 0	...	-	-	F	T
4						

	Actions	...	◀			
1	Calculation.isLeapYear	...	F	T	F	T
2	Calculation.postInfo		☑	☑	☑	☑
3						

	Overrides					

Rule Statements

ID	Text
1	If a year is not divisible by 4 then its not a leap year
2	If a year is divisible by 4 but not by 100 then its a leap year
3	If a year is divisible by 4 and by 100, but not by 400 then it is not a leap year.
4	If a year is divisible by 4 and by 100 and by 400 then it is a leap year

This sheet determines the number of days in the month taking into consideration whether the years is a leap year (as determined by the previous rule sheet)

LeapYear | GetDateInt | GetDateString

Rules

	Conditions	...	1	2	3	4
1	Calculation.dateMonth	...	{ 1 , 3 , 5 , 7 , 8 , 10 , 12 }	2	{ 4 , 6 , 9 , 11 }	2
2	Calculation.isLeapYear	...		F	-	T
3						

	Actions	...	◀			
1	Calculation.lastDayofMonthNumber	...	31	28	30	29
2						

	Overrides					

Rule Statements

ID	Text
1	Month {Calculation.dateMonth} has 31 days
2	Month {Calculation.dateMonth} has 28 days because {Calculation.dateYear} is not a leap year
3	Month {Calculation.dateMonth} has 30 days
4	Month {Calculation.dateMonth} has 29 days because {Calculation.dateYear} is a leap year

This sheet generates the string form of the date of the last day of the month by concatenating the various components with the '+' operator and also determines what day of the week it falls on. It makes use of the operators: toString, dateStringToDateTime, toDateTime and dayOfWeek

Scope

Preconditions/Filters

Rules (non-conditional)

N.1	Calculation.dateString = Calculation.dateMonth.toString + '/' + Calculation.lastDayofMonthNumber.toString + '/' + Calculation.dateYear.toString
N.2	Calculation.date = Calculation.dateString.toDateTime
N.3	Calculation.dayOfWeek = Calculation.date.dayOfWeek
N.4	

Rules

	Conditions	...	1	2	3	4	5	6	7
1	Calculation.dayOfWeek	...	1	2	3	4	5	6	7
2									

	Actions	...	◀						
1	Calculation.lastDayofMonthString	...	'Sunday'	'Monday'	'Tuesday'	'Wednesday'	'Thursday'	'Friday'	'Saturday'
2	Calculation.postInfo		☑	☑	☑	☑	☑	☑	☑
3									
	Overrides								

Rule Statements

ID	Text
1	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
2	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
3	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
4	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
5	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
6	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}
7	The last day of {Calculation.dateMonth}/{Calculation.dateYear} is a {Calculation.lastDayofMonthString}