**Date and Time Tools by Task**

The following table correlates tasks with various SAS System language elements that are available for working with time and date data.

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| --- | --- | --- | --- | --- |
| ***Tasks with Dates and Times, Part 1*** | | | | |
| **To do this ...** | **Use this ...** | **List** | **Input** | **Result** |
| Write SAS date values in recognizable forms | Date formats | DATE**w.** | 14686 | 17MAR00 |
|  |  | DATE9. | 14686 | 17MAR2000a |
|  |  | DAY**w.** | 14686 | 17 |
|  |  | DDMMYY**w.** | 14686 | 17/03/00 |
|  |  | DDMMYY10. | 14686 | 17/03/2000 |
|  |  | DDMMYYB**w.** | 14686 | 17 03 00 |
|  |  | DDMMYYB10. | 14686 | 17 03 2000 |
|  |  | DDMMYYC**w.** | 14686 | 17:03:20 |
|  |  | DDMMYYC10. | 14686 | 17:03:2000 |
|  |  | DDMMYYD**w.** | 14686 | 17-03-00 |
|  |  | DDMMYYD10. | 14686 | 17-03-2000 |
|  |  | DDMMYYN**w.** | 14686 | 17MAR00 |
|  |  | DDMMYYN10 | 14686 | 17MAR2000 |
|  |  | DDMMYYP**w.** | 14686 | 17.03.00 |
|  |  | DDMMYYP10. | 14686 | 17.03.2000 |
|  |  | DDMMYYS**w.** | 14686 | 17/03/00 |
|  |  | DDMMYYS10. | 14686 | 17/03/2000 |
|  |  | DOWNAME. | 14686 | Friday |
|  |  | EURDFDE**w.** | 14686 | 17MAR00 |
|  |  | EURDFDE9. | 14686 | 17MAR2000 |
|  |  | EURDFDN**w.** | 14686 | 5 |
|  |  | EURDFDWN**w.** | 14686 | Friday |
|  |  | EURDFMY**w.** | 14686 | MAR00 |
|  |  | EURDFDMY7 | 14686 | MAR2000 |
|  |  | EURDFWDX**w.** | 14686 | 17MAR2000 |
|  |  | EURDFMNw. | 14686 | March |
|  |  | EURDFWKX**w.** | 14686 | Friday, 17 MAR 2000 |
|  |  | JULDAY**w.** | 14686 | 77 |
|  |  | JULIAN**w.** | 14686 | 00077 |
|  |  | MINGUO**w.** | 14686 | 89/03/17 |
|  |  | MINGUO10. | 14686 | 0089/03/17 |
|  |  | MMDDYY**w.** | 14686 | 03/17/00 |
|  |  | MMDDYY10. | 14686 | 03/17/2000 |
|  |  | MMDDYYB**w.** | 14686 | 03 17 00 |
|  |  | MMDDYYB10.**w.** | 14686 | 03 17 2000 |
|  |  | MMDDYYC**w.** | 14686 | 03:17:00 |
|  |  | MMDDYYC10 | 14686 | 03:17:2000 |
|  |  | MMDDYYD**w.** | 14686 | 03-17-00 |
|  |  | MMDDYYD10. | 14686 | 03-17-2000 |
|  |  | MMDDYYN**w.** | 14686 | 031700 |
|  |  | MMDDYYN10. | 14686 | 03172000 |
|  |  | MMDDYYP | 14686 | 03.17.00 |
|  |  | MMDDYYP10. | 14686 | 03.17.2000 |
|  |  | MMDDYYS | 14686 | 03/17/00 |
|  |  | MMDDYYS10. | 14686 | 03/17/2000 |
|  |  | MMYY.**xw.** | 14686 | 03M2000 |
|  |  | MMYYC**w.** | 14686 | 03:2000 |
|  |  | MMYYD. | 14686 | 03-2000 |
|  |  | MMYYN. | 14686 | 032000 |
|  |  | MMYYP. | 14686 | 03.2000 |
|  |  | MMYYS. | 14686 | 03/2000 |
|  |  | MONNAME. | 14686 | March |
|  |  | MONTH. | 14686 | 3 |
|  |  | MONYY. | 14686 | MAR2000 |
|  |  | NENGO. | 14686 | H.12/03/17 |
|  |  | PDJULG**w.** | 14686 | 2000077F |
|  |  | PDJULI**w.** | 14686 | 0100077F |
|  |  | QTR**w.** | 14686 | 1 |
|  |  | QTRR**w.** | 14686 | I |
|  |  | TIME**w.d** | 14686 | 4:04:46 |
|  |  | TIMEAMPM**w.d** | 14686 | 4:04:46 AM |
|  |  | TOD | 14686 | 4:04:46 |
|  |  | WEEKDATE**w.** | 14686 | Friday, March 17, 2000 |
|  |  | WEEKDAY**w.** | 14686 | 6 |
|  |  | WORDDATE.**w.** | 14686 | March 17, 2000 |
|  |  | WORDDATX**w.** | 14686 | 17 MARCH 2000 |
|  |  | YEAR**w.** | 14686 | 2000 |
|  |  | YYMM**w.** | 14686 | 2000M03 |
|  |  | YYMMC**w.** | 14686 | 2000:03 |
|  |  | YYMMDD**w.** | 14686 | 2000-03 |
|  |  | YYMMP**w.** | 14686 | 2000.03 |
|  |  | YYMMS. | 14686 | 2000/03 |
|  |  | YYMMN. | 14686 | 200003 |
|  |  | YYMMDD**w.** | 14686 | 00-03-17 |
|  |  | YYMON. | 14686 | 2000MAR |
|  |  | YYQ**xw.** | 14686 | 2000Q1 |
|  |  | YYQC**w.** | 14686 | 2000:1 |
|  |  | YYQD**w.** | 14686 | 2000-1 |
|  |  | YYQP**w.** | 14686 | 2000.1 |
|  |  | YYQS**w.** | 14686 | 2000/1 |
|  |  | YYQN**w.** | 14686 | 20001 |
|  |  | YYQR**w.** | 14686 | 2000QI |
|  |  | YYQRC**w.** | 14686 | 2000:I |
|  |  | YYQRD**w.** | 14686 | 2000-I |
|  |  | YYQRP**w.w.** | 14686 | 2000.I |
|  |  | YYQRS**w.** | 14686 | 2000/I |
|  |  | YYQRN**w.** | 14686 | III |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Tasks with Dates and Times, Part 2*** | | | | |
| **To do this ...** | **Use this ...** | **List** | **Input** | **Result** |
| Date Tasks |  |  |  | |
| Read calendar dates as SAS date  Note: YEARCUTOFF=1920 | Date informats | DATE**w.** | 17MAR2000 | -14534 |
|  |  | DATE9. | 17MAR2000 | 14686 |
|  |  | DDMMYY**w.** | 170300 | 14686 |
|  |  | DDMMYY8. | 17032000 | 14686 |
|  |  | JULIAN**w.** | 0077 | 14686 |
|  |  | JULIAN7. | 2000077 | 14686 |
|  |  | MMDDYY**w.** | 031700 | 14686 |
|  |  | MMDDYY10. | 03172000 | 14686 |
|  |  | MONYY**w.** | MAR00 | 14670 |
|  |  | NENGO**w.** | H.12/03/17 | 14686 |
|  |  | YYMMDD**w.** | 000317 | 14686 |
|  |  | YYMMDD10. | 20000317 | 14686 |
|  |  | YYQ**w.** | 00Q1 | 14610 |
| Create date values from pieces | Date functions | DATEJUL | 2000077 | 14686 |
|  |  | DHMS | '17MAR2000'D,  00,00,00 | 14686 |
|  |  | HMS | 14,45,32 | 53132 |
|  |  | MDY | 03,17,00 | 14686 |
|  |  | MDY | 03,17,2000 | 14686 |
|  |  | YYQ | 00,1 | 14610 |
| Extract a date from a datetime value | Date functions | DATEPART | '17MAR00:00:00  'DT | 14686 |
| Return today's date as a SAS date | Date functions | DATE() or TODAY() (equivalent) | ( ) | SAS date for today |
| Extract calendar dates from SAS | Date functions | DAY | 14686 | 17 |
|  |  | HOUR | 14686 | 4 |
|  |  | JULDATE | 14686 | 0077 |
|  |  | JULDATE7 | 14686 | 2000077 |
|  |  | MINUTE | 14686 | 4 |
|  |  | MONTH | 14686 | 3 |
|  |  | QTR | 14686 | 3 |
|  |  | SECOND | 14686 | 46 |
|  |  | WEEKDAY | 14686 | 6 |
|  |  | YEAR | 14686 | 2000 |
| Write a date as a constant in an expression | SAS date constant | **'ddmmmyy'**d  or  **'ddmmmyyyy'** | '17mar00'd  '17mar2000'd | 14686 |
| Write today's date as a string | SYSDATE automatic macro variable | SYSDATE | &SYSDATE | Date at time of SAS initialization in DDMMMYY |
|  | SYSDATE9 | SYSDATE9 | &SYSDATE9 | Date at time of SAS initialization in DDMMMYYYY |
| Time Tasks |  |  |  | |
| Write SAS time values as time values | time formats | HHMM. | 53132 | 14:46 |
|  |  | HOUR. | 53132 | 15 |
|  |  | MMSS. | 53132 | 885 |
|  |  | TIME. | 53132 | 14:45:32 |
|  |  | TOD. | 53132 | 14:45:32 |
| Read time values as SAS time values | Time informats | TIME | 14:45:32 | 53132 |
| Write the current time as a string | SYSTIME automatic macro variable | SYSTIME | &SYSTIME | Time at moment of execution in HH:MM |
| Return the current time of day as a SAS time value | Time functions | TIME( ) | ( ) | SAS time value at moment of execution in NNNNN.NN |
| Return the time part of a SAS datetime value | Time functions | TIMEPART | SAS datetime value in NNNNNNNNNN.N | SAS time value part of date value in NNNNN.NN |
| Datetime Tasks |  |  |  | |
| Write SAS datetime values as datetime values | Datetime formats | DATEAMPM | 1217083532 | 26JUL98:02:45 PM |
|  |  | DATETIME | 1268870400 | 17MAR00:00:00  :00 |
|  |  | EURDFDT | 1217083532 | 26JUL98:14:45:32 |
| Read datetime values as SAS datetime values | Datetime informats | DATETIME | 17MAR00:00:00:00 | 1268870400 |
| Return the current date and time of day as a SAS datetime value | Datetime functions | DATETIME() | () | SAS datetime value at moment of execution in NNNNNNNNNN.N |
| Interval Tasks |  |  |  | |
| Return the number of specified time intervals that lie between the two date or datetime values | Interval functions | INTCK | week 2  01aug60  01jan01 | 1055 |
| Advances a date, time, or datetime value by a given interval, and returns a date, time, or datetime value | Interval functions | INTNX | day  14086  01jan60 | 14086 |

The SAS System also supports international formats and informats that are equivalent to some of the most commonly used English-language date formats and informats. For details, see "SAS Formats" and "SAS Informats."