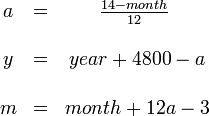
**Converting Gregorian calendar date to Julian Day Number**

The algorithm is valid for all Gregorian calendar dates after 4800 BC.[[13]](http://en.wikipedia.org/wiki/Julian_day#cite_note-12)

You must compute first:



then compute:


JDN = 
day + 
\frac{153m+2}{5}+
365y+
\frac{y}{4} -
\frac{y}{100} +
\frac{y}{400} -
32045


**[**[**edit**](http://en.wikipedia.org/w/index.php?title=Julian_day&action=edit&section=6)**] Converting Julian calendar date to Julian Day Number**

The algorithm[[14]](http://en.wikipedia.org/wiki/Julian_day#cite_note-13) is valid for all values of Y ≥ −4712, that is, for all JD ≥ 0.


JDN = 
367y
-
\frac {7 \left  (y + \frac{\left(m+9\right)}{12} \right )}{4}
+
\frac{285m}{9}
+
d-730530


**[**[**edit**](http://en.wikipedia.org/w/index.php?title=Julian_day&action=edit&section=7)**] Finding Julian date given Julian Day Number and time of day**

For the full Julian date, not counting [leap seconds](http://en.wikipedia.org/wiki/Leap_second) (divisions are real numbers):

\begin{matrix}JD & = & JDN + \frac{hour - 12}{24} + \frac{minute}{1440} + \frac{second}{86400}\end{matrix}.

So, for example, January 1, 2000 at midday corresponds to JD = 2451545.0

The day of the [week](http://en.wikipedia.org/wiki/Week) can be determined from the Julian day number by calculating it [modulo](http://en.wikipedia.org/wiki/Modular_arithmetic) 7, where 0 means Monday.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***JDN* mod 7** | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| **Day of the week** | Mon | Tue | Wed | Thu | Fri | Sat | Sun |