

## How to Find the Day of the Week for any Date

This is one Mental Mathematics Trick that never fails to amaze people. However, there is some memorizing that will have to be done on your part. Here is the first thing to memorize, the numbers associated with each day of the week:

Day of Week	Number
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6
Sunday	7 or 0

You can remember this table easily, or make up things like “Tuesday is 2’s Day”.

Here is your next table to memorize, and that is for the number associated with the month of the year:

Month of year	Code
January	<b>6</b> *
February	<b>2</b> *
March	<b>2</b>
April	<b>5</b>
May	<b>0</b>
June	<b>3</b>
July	<b>5</b>
August	<b>1</b>
September	<b>4</b>
October	<b>6</b>
November	<b>2</b>
December	<b>4</b>

\* For January and February, you subtract 1 to these numbers on Leap Years, such as 2000, 2004, 2008, etc.

Now how you remember this is again up to you Dec = XMAS which has 4 letters etc. If you look at the table below, you can see how this table is invented. To each Code number add the number of days over 28 that the month has. If you are over 6, then subtract 7. This is the code number for the next month.

Month of year	Code	Days in the Month	Subtract 28	Add to Code #	If over 7 Subtract 7
January	<b>6</b> *	31	$- 28 = 3$	$6 + 3 = 9$	$- 7 = 2$
February	<b>2</b> *	28 or 29 (leap year)	$- 28 = 0$ or 1	$2 + 0 = 2$	
March	<b>2</b>	31	$- 28 = 3$	$2 + 3 = 5$	
April	<b>5</b>	30	$- 28 = 2$	$5 + 2 = 7$	$- 7 = 0$
May	<b>0</b>	31	$- 28 = 3$	$0 + 3 = 3$	
June	<b>3</b>	30	$- 28 = 2$	$3 + 2 = 5$	
July	<b>5</b>	31	$- 28 = 3$	$5 + 3 = 8$	$- 7 = 1$
August	<b>1</b>	31	$- 28 = 3$	$1 + 3 = 4$	
September	<b>4</b>	30	$- 28 = 2$	$4 + 2 = 6$	
October	<b>6</b>	31	$- 28 = 3$	$6 + 3 = 9$	$- 7 = 2$
November	<b>2</b>	30	$- 28 = 2$	$2 + 2 = 4$	
December	<b>4</b>	31	$- 28 = 3$		

Finally you have one more table to memorize: see the next page

Year	Code	Year2	Code2	Year3	Code3	Year4	Code4
2000	0	2025	3	2050	6	2075	2
2001	1	2026	4	2051	0	2076	4
2002	2	2027	5	2052	2	2077	5
2003	3	2028	0	2053	3	2078	6
2004	5	2029	1	2054	4	2079	0
2005	6	2030	2	2055	5	2080	2
2006	0	2031	3	2056	0	2081	3
2007	1	2032	5	2057	1	2082	4
2008	3	2033	6	2058	2	2083	5
2009	4	2034	0	2059	3	2084	0
2010	5	2035	1	2060	5	2085	1
2011	6	2036	3	2061	6	2086	2
2012	1	2037	4	2062	0	2087	3
2013	2	2038	5	2063	1	2088	5
2014	3	2039	6	2064	3	2089	6
2015	4	2040	1	2065	4	2090	0
2016	6	2041	2	2066	5	2091	1
2017	0	2042	3	2067	6	2092	3
2018	1	2043	4	2068	1	2093	4
2019	2	2044	6	2069	2	2094	5
2020	4	2045	0	2070	3	2095	6
2021	5	2046	1	2071	4	2096	1
2022	6	2047	2	2072	6	2097	2
2023	0	2048	4	2073	0	2098	3
2024	2	2049	5	2074	1	2099	4

Here, again, the pattern is add one each year, but add two in a leap year. If you are over 6, then subtract 7.

You don't have to memorize this table. Take the year above 2000 and call it  $2000 + x$  (So in 2009,  $x = 9$ ). Now take  $x$  and divide it by 4 and ignore any remainder and add that to "x". Now subtract a multiple of 7 that gets you from 0 to 6. So, for 2057,  $x = 57$ , and 57 divided by 4 gives you 14, remainder of 1 (ignore the 1). Add 14 to 57 and get 71 and 71 subtract 70 = 1. For other Centuries add the following in your year code calculation (1800's + 3, 1900's + 1, 2100's + 5)

Finally, here is how you put it all together:

Add the number Code for the Month, for the year, and the day number. If the result is over 6, then subtract a multiple of 7 so that you get an answer from 0 to 6. This then gives you the day of the week code.

Example: Find the Day of the Week for November 6, 2009. Code for month = 2, Date = 6, Code for Year = 4:  
 $2 + 6 + 4 = 12$  (subtract 7) = 5, Thus November 6, 2009 is a Friday. Yup, today is a Friday.

Example: Find the Day of the Week for February 6, 2017. Code for month = 2, Date = 6, Code for Year = 0:  
 $2 + 6 + 0 = 8$  (subtract 7) = 1, Thus February 6, 2017 is a Friday.

Example: Find the Day of the Week for December 18, 2013. Code for month = 4, Date = 18, Code for Year = 2:  
 $4 + 18 + 2 = 24$  (subtract 21) = 3, Thus December 18, 2013 is a Wednesday.

Example: Find the Day of the Week for December 18, 1947. Code for month = 4, Date = 18, Code for Year = 3:  
 $4 + 18 + 3 = 25$  (subtract 21) = 4, Thus December 18, 1947 was a Thursday. Yup, I was born on a

Thursday

Happy memorizing!