

## Calculating Day Of The Week For Any Given Date

Hi friends, and welcome to this third article of my mine in which I will explain how to calculate the Day of the Week for any given date, say a birth date.

You may have read my previous articles on the Virahanka sequence. This article is similar to those because it explains a concept that is so impressive to be demonstrated in the public.

Okay, you may already be thinking about the applications of this great trick. Wouldn't it be awesome if you could do this:

**You (to your friend): Hey, in which year were you born?**

**Your friend: 1999**

**You: Okay, what month?**

**Your friend: March**

**You: Fine, and finally, what was the date?**

**Your friend: It was the 13<sup>th</sup>.**

**You: Oh, thank you, I think you were born on a Saturday.**

**Your friend: .....(stunned)**

That looks cool. Fortunately, such a thing is easily possible if you have the *patience* to practice.

Fine let's get on with the algorithm. I learnt this from a great Mathematician, Arthur Benjamin. So, before I begin, **Thank You Dr. Benjamin!!**

Okay, first step: ask the birth year from the audience or the friend. Say, he/she says-1973.

Now what are you supposed to do? Here are the simple steps to be followed:

- Take into consideration the last two digits of the year (forget 19 and remember 73)
- Remember the last two digits as a two digit number(73)
- Divide the two digit number by four and remember the quotient (here, 73 by 4 is 18 with remainder 1. Remember 18 and forget the remainder.)
- Add the quotient to the number ( $73 + 18=91$ )

- Divide the new number (91) by seven and remember the remainder (91 by 7 is 13 with remainder 0. Remember the 0.)

Okay, those are the calculations to be done when the year is announced.

Next the month.

This is the only part of the whole thing that requires memory.

You have to first memorize this table.

- Jan-6
- Feb-2
- Mar-2
- April-5
- May-0
- June-3
- July-5
- August-1
- September-4
- October-6
- November-2
- December-4

Nothing to worry, these are just a set of codes for the months. (Make sure that you use these codes in your calculations rather just using 1 for Jan, 2 for Feb, 3 for Mar and so on..)

Okay, if you know this by heart, the rest of the calculations are a piece of cake.

After you carried out the calculations for the year, proceed by asking the month.

Say, the friend says-April

Now, what is the code for April? It is 5.

Thus, add five to the remainder of the previous calculations (the remainder was 0, so your new number is  $0 + 5$ , which is 5)

Keeping five in mind, proceed to the last part of the calculations by

asking the date of birth.

Say, the friend says the date of birth is the 25<sup>th</sup>. You just have to add the date to your number(5) (Here you get  $5 + 25 = 30$ )

Just divide the new number (30) by seven and remember the remainder (here the remainder is two).

If it is a date in the 20<sup>th</sup> century, add one to the final total

If it is a date in the 21<sup>th</sup> century, leave it as it is

If the final total(after the century adding part) is:

**0-it is Sunday**

**1-it is Monday**

**2-It is Tuesday**

**3-It is Wednesday**

**4-It is Thursday**

**5-It is Friday**

**6-It is Saturday**

There, that's done.

Now, some Pss:

If the year is a leap year, then the code for Jan is 5 and for Feb it is 1. Everything else remains same.

Don't try this live, until you are confident with all the calculations!!

**Thanks and Ciao!!**

-Raghavendra N Bhat,  
Age 14,  
Manipal,  
Karnataka,  
India.

Email: [raghavendra@ebhats.com](mailto:raghavendra@ebhats.com)