February 29, 2012—Third Leap Day of the Third Millennium
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Today, Wednesday, February 29, 2012 marks the third leap day of this (third) millennium. Note that this (21st) century contains 24 leap days and the third millennium has a total of 242 [1]. To help us celebrate this leap day, I put together the following leap-day trivia. I hope you will enjoy reading it:

It only happens once every 4 years

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- The last time a leap day occurred on a Wednesday was in 1984 and next time will be in 2040.
- The first leap day of the Gregorian calendar, February 29, 1584, also occurred on a Wednesday.
- Based on the month-day-year date format, the full date of today's leap day is written as 2-29-2012, or simply 2292012. If number 2292012 is split as 2, 29, 20, and 12, these four numbers add up to 63 which equals 3 times 21, where 3 represents both the third leap day and the third millennium and 21 indicates the 21st century.
- The product of the nonzero digits of 2292012 equals 144, the reverse of which is 441. This equals the square of 21, again indicating this century. 2292012 is also the third leap day of the 21st century where the digits of 21 add up to 3.
- Also, 2292012 equals 2 x 2 x 9 x 63667 where the first three numbers put side-by-side represents 229, that is, February 29th! In addition, the prime factors of the reverse of prime 63667 (which are 2, 7, 17 and 23) add up to 49 which could be thought of as (2+2)9 or (2x2)9, each resembling 229!
- If the digits of 2292012 are numbered from one to seven, eliminating the even-numbered digits yields 2902, that is, 29 February in the day-month date format.
- 29-2-2012 (or simply, 2922012) interpreted in day-month-year date format corresponds to today's leap day. Note that 2922012 equals 828 times 3529. Interestingly enough, if the places of digits 3 and 2 are switched in number 3529, 828 times 2539 yield the reverse of 2922012!

- Leap day in 2032 is numerically unique since 2302 (which is the reverse of 2032) equals twice the sum of numbers 229 (representing February 29th in the month-day date format) and 922 (which is reverse 229).
- The full date of leap day in 2044 expressed in the day-month-year date format as 29-2-2044 (or simply, 2922044) is numerically interesting because if number 2922044 is split as 292 and 2044, 2044 equals seven times 292.
- If expressed in the day-month-year date format, leap day will be a palindrome day in 2092 as 29-02-2092 (29022092). In fact, this will be the last palindrome day of the 21st century!
- After 2092, leap day will be a palindrome day again in the day-month-year date format in 2292 expressed as 29-2-2292 (or 2922292). Also, leap day in 2292 expressed in the month-day-year date format written as 2292292 is interesting because every three adjacent digits of this number or its reverse is either 229 (representing February 29th) or 292 (29th of February).
- The 21st leap day of the 21st century, to occur in 2084, is numerically interesting since 2084 equals four times the sum of 229 (representing February 29) and 292 (representing 29 February).
- Leap day will be a perfect square date in the month-day-year date format in 2196 since 2292196 equals 1514 x 1514.
- The famous Italian composer Gioachino Rossini (29 February 1792-13 November 1868) was born on a leap day in 1792. Although Rossini died at age 76, today, 29 February 2012, would be his 53rd birthday! If he were alive, he would have turned 220 years old today. (Rossini had only 18 birthdays during his lifetime. His 76th birthday is to occur in 2108.)

Happy leap day, and happy 53rd birthday, Rossini!

[1] A. S. Inan, "It only happens once every 4 years," *The Beacon*, Vol. 109, Issue No. 18, pp. 9-10, University of Portland, Portland, Oregon, February 28, 2008.
http://www.upbeacon.net/2.10850/it-only-happens-once-every-4-years-1.1513327?MMode=true#.T0v12IWtpvk