Numerically Special Calendar Dates of 2012 in Day-Month-Year Date Format

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Today at midnight, we will say farewell to 2011 and welcome its next consecutive counterpart, 2012. Note that these two years are not only consecutive but there exists another unique numerical connection which couples them further. This connection is based on the fact that 2011 is a prime-year since 2011 is the 305th prime number. (As an aside, the last prime year before 2011 was 2003 and the next will be 2017.) Interestingly enough, four times the reverse of number 305 (which is 503) yields 2012. Isn't that something? It's like a "secretly-coded" connection!

As we are about to enter the new year, I decided to research some of the full calendar dates of 2012 to see if I can identify some that possess unique numerical properties. Note that my investigation is solely recreational--just for fun. I am happy to report that 2012 indeed contains several date numbers which are numerically special. My hope is that these findings will get the attention of people who do math puzzles and others who have curiosity about and interest in numerically special calendar dates, birthdays, anniversary dates, historical dates, etc. In addition, number nerds like me would with no question love to find out another number with a rare numerical property. Also, the results of my report may serve as a vehicle to get some young people and even adults more interested in numbers and mathematics.

The following is a list of the results of my investigation that I hope you will enjoy reading and sharing:

- First of all, note that 2012 is the 12th year of the 21st century!
- Second, all calendar date numbers in 2012 expressed in both day-month-year and month-day-year date formats are divisible by four since the year number ends with 12!
- Third, 2012 contains two palindrome days: 21022012 is an eight-digit one representing 21 February 2012 and 2102012 is made of seven digits corresponding to 2 October 2012! (This is the second and last year of this century containing two palindrome dates in the day-month-year date format. The first one was last year (2011).) Also, the two palindrome dates of this year 21022012 and 2102012 have a fascinating secret connection between them: 2102012 can be obtained from 21022012 by multiplying 21022012 with 11111 and dividing the result by 1111 (or 21022012 can be obtained from 2102012 by dividing 2102012 with 1111 and multiplying the result by 11111)! Isn't this something?
- Fourth, when each date number is expressed using only the rightmost two digits of the year number (12), the following fourteen palindrome dates are to occur this year: 2-1-12, 21-1-12, 21-2-12 (which is the same day as 21022012), 21-3-12, 21-4-12, 21-5-12, 21-6-12, 21-7-12, 21-8-12, 21-9-12, 2-10-12 (which is the same day as 2102012), 2-11-12, 21-11-12, and 2-12-12.
- Fifth, if 22 February 2012 date is expressed as 2222012, this number equals 2 x 2 x 13 x 13 x 19 x 173 and these prime numbers add up to 222, that is, 22 February!
- Sixth, 2012 is a leap year, the third to occur in this (21st) century. 29 February 2012 will be the third leap day of the third millennium! Also, leap day expressed as 2922012 = 828 x 3529 versus its reverse 2102292 = 828 x 2539!
- Seventh, 5 March 2012 is another interesting date number for two reasons: If expressed as 5032012, 503 is one-fourth of 2012! (Note that date number 5032012 is divisible by 2012.) On the other hand, if expressed as 532012, it equals the product of two palindrome numbers as 532012 = 676 x 787 where the second palindrome can be obtained from the first by incrementing each of its digits by one!
- 16 March 2012 expressed as 16032012 equals 8004 x 2003 where 8004 − 2003 = 6001 and twice reverse of 6001 yields 2012! (Note that 8004 = 2 x 2 x 3 x 23 x 29 and 2003 is a prime number.)
- 20 March 2012 written as 20032012 equals 1001 x 20012 = 4004 x 5003! (Note that 5003 is a prime.)
- 3 May 2012 expressed as 3052012 is an interesting date number because if it's split as 305 and 2012, the reverse of one-fourth of 2012 equals 305!
- 10 June 2012 expressed as 10062012 is also divisible by 2012 since 10062012 = 5001 x 2012!
- Date number 1092012 representing both 1 September (1-09) and 10 September (10-9) in 2012 is divisible by 901 which is the reverse of 109 since 1092012 = 901 x 1212!
- 15 September 2012 expressed as 15092012 is also divisible by 2012 since 15092012 = 7501 x 2012! (Note that 7501 = 13 x 577.)

- 23 October 2012 written as 23102012 is divisible by 5591 (which is reverse of my birth year 1955)! (23102012 = 4 x 1033 x 5591.)
- If each date number is expressed using only the rightmost two digits of the year number (12), 10 November 2012 expressed as 10-11-12 consists of three consecutive prime numbers! (A similar and last such date will occur next year on 11-12-13.)
- 20 November 2012 written as 20112012 is interesting because its left half is 2011 and right half is 2012 (two consecutive numbers)!
- Again, if the year number is expressed by using only its rightmost two digits, 12 December 2012 expressed as 12-12-12 is a unique date since its day, month and year numbers are all equal! (Note that this is the last such date to occur in this century.)
- 20 December 2012 expressed as 20122012 is unique since its left and right halves are the same number! (This is the last such date in day-month-year date format to occur in this century.) Also, 20122012 = 10001 x 2012!
- Of course, the "mysterious" ending date of the Long Count Mayan Calendar is also to occur this year on 21 December 2012. I found interesting unique numerical properties related to this calendar date which I reported in the second document posted on my personal website on 21 December 2012.