

Ten Numerical Brainteasers to Celebrate Ingrid Bergman's Centennial Birthday

(Aziz Inan, Electrical Engineering, University of Portland, Portland, Oregon)

(August 29, 2015)



Ingrid Bergman (Born: 29 August 1915, Stockholm, Sweden-Died: 29 August 1982, London, England) was a Swedish actress who starred in a variety of European and American films. She won three Academy Awards, two Emmy Awards, four Golden Globe Awards, and the Tony Award for Best Actress. She is best remembered for her roles in *Casablanca* (1942) and *Notorious* (1946) [1].

Today, August 29, 2015, marks not only Ingrid Bergman's 100th birthday but also the 33rd anniversary of her death. In her honor and to celebrate her centennial birthday, I constructed the following ten numerical brainteasers:

1. If Bergman's birth date 29-8 (representing 29 August) is split as 29 and 8, 8 plus reverse of 29 (which is 92) add up to her new birthday number, 100. In addition, 29 is the 10th prime number where square of ten yields 100.
2. 298 (Bergman's birth date, 29 August) also possesses an interesting numerical property. Twice the sum of the squares of the digits of 298 yields back 298.
3. If numbers are assigned to the letters of the Swedish (and English) alphabet as A being 1, B is 2, C 3, etc., the numbers assigned to the letters of "Ingrid" and "Bergman" each add up to 61 and 60, and the sum of these two numbers yield 121. Interestingly enough, the square of the sum of the digits of the day number of Bergman's birthday, 29, also add up to 121.
4. Bergman died on 29-8-1982 in which the leftmost and the rightmost three digits of this date number contain the same three digits, 2, 8, and 9. Bergman's 13th birthday expressed as 29-8-1928 had the same property. In addition, her 13th birthday expressed in the month-day-year date format as 8-29-1928 was a palindrome date.
5. The digits of 1915 (Bergman's birth year) add up to 16, the reverse of which is 61, coinciding with the sum of the numbers assigned to the letters of Bergman's first name, "Ingrid". Also, half of 16 yield 8, the month number of Bergman's birth date. (Note that the digits of 2015 add up to 8.) In addition, if 29-8-1915 (Bergman's birth date) is split into 29, 8, and 1915, these three numbers add up to twice 16 x 61!
6. Bergman's 100th birthday written as 2982015 (representing 29-8-2015) equals $3 \times 3 \times 3 \times 3 \times 5 \times 37 \times 199$, where the prime factors 3, 5, 37 and 199 add up to four times 61 ("Ingrid"). Also, the sum of the nonrepeating prime factors 5, 37 and 199 is 241, where coincidentally, 241st day of 2015 is Bergman's 100th birthday, 2982015.
7. If the reverse of Bergman's birth year 1915 (which is 5191) is split as 51 and 91, these two numbers add up to 142, the reverse of which is also 241. Again, Bergman was born on the 241st day of 1915 (that is, 29-8-1915).

8. The digits of 29-8-1915 (Bergman's birth date) add up to 35, the reverse of which is 53. Interestingly enough, the 53rd prime number is also 241.
9. Bergman died at age 67 where the squares of the digits of 67 add up to 85, the reverse of which is 58, which equal twice 29. (Coincidentally, the squares of the digits of 29 add up to 85 too.) Also, names "Ingrid" and "Bergman" each consist of 6 and 7 letters respectively, where digits 6 and 7 put side by side yield 67.
10. Bergman's 101st birthday coincides with the 242nd day of 2016 where 242 is twice 121, the sum of the numbers assigned to the letters of "Ingrid Bergman." Also, if 1982 (the year Bergman died) is split into numbers 19 and 82, these two numbers add up to 101. Bergman's 101st birthday will also coincide with the 34th anniversary of her death where 34 equals 19 plus 15, which make up her birth year, 1915.

Lastly, the movie Casablanca had its world premiere in 1942. Interestingly enough, the digits of 1942 add up to 16 and 19 plus 42 (which side by side make up 1942) yield 61 ("Ingrid"). Also, 2491 (which is the reverse of 1942) equals 47×53 , where primes 47 and 53 add up to 100.

Happy 100th birthday, Ingrid Bergman!

[1] Ingrid Bergman, Wikipedia
https://en.wikipedia.org/wiki/Ingrid_Bergman