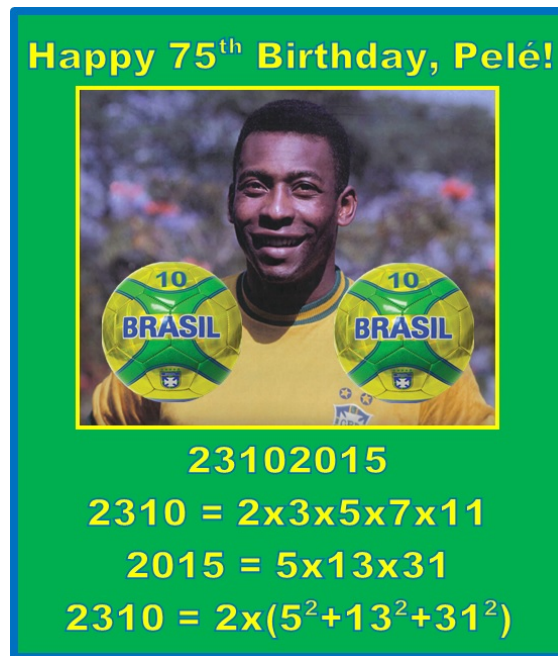


## **Happy 75<sup>th</sup> Birthday, Pelé!**

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World famous Brazilian soccer icon, Pelé, was born on 23 October 1940 and this week Friday, 23 October 2015, will mark his 75<sup>th</sup> birthday [1]. Pelé was one of the heroes of my childhood and I followed so many of his soccer games on radio and television with great excitement. To thank Pelé for making soccer so much fun and to celebrate his upcoming 75<sup>th</sup> birthday, I prepared the following half-dozen numerical birthday brainteasers for him and I hope he will enjoy reading them:

1. If Pelé's birthday 23-10-1940, simply expressed as 23101940, is split in the middle into 2310 and 1940, there is a numerical connection between these two numbers. Interestingly enough, the square of each digit of 2310 corresponds to one of the digits of 1940.
2. Pelé's birth date 23 October expressed as 2310 is numerically very special because it equals the product of the first five prime numbers, that is,  $2310 = 2 \times 3 \times 5 \times 7 \times 11$ .
3. Pelé's 73<sup>rd</sup> birthday in 2013 expressed as 23102013 was numerically special because if split in the middle as 2310 and 2013, each of these two numbers is made of the same four digits, 0, 1, 2 and 3. (Note that this property will repeat again on Pelé's 91<sup>st</sup> birthday, to occur on 23102031.)
4. Pelé's 74<sup>th</sup> birthday last year written as 23102014 was also unique. Why? If split in the middle into 2310 and 2014, the difference between these two numbers equals 296 and amazingly, the 296<sup>th</sup> day of 2014 coincides with Pelé's 74<sup>th</sup> birthday, 23 October. Wow! In addition, 296 equals four times 74. Also, the prime factors of 2014 (which are 2, 19 and 53) when Pelé's 74<sup>th</sup> birthday occurred add up to 74.

5. Pelé's 75<sup>th</sup> birthday can be expressed as 23102015. If this date is split in the middle into 2310 and 2015, interestingly enough, the sum of the squares of the prime factors of 2015 (which are 5, 13 and 31) when doubled yield 2310. In addition, the reverse of 2310, given by 0132, equals Pelé's new age 75 plus its reverse, 57. Also, if 2015 is split as 20 and 15, these two numbers add up to 35, which equals the product of the digits of 75.
6. Pelé's 76<sup>th</sup> birthday to occur next year on 23102016 will also be special. How so? If 23102016 is split into 23, 10, and 2016, 23 and 10 add up to 33, and 33 times the sum of the digits of 2016 yields 297. Note that the 297<sup>th</sup> day of 2016 coincides with Pelé's 76<sup>th</sup> birthday, 23102016!

Long live Pelé and happy 75<sup>th</sup> birthday!

[1] Pelé, Wikipedia

<https://en.wikipedia.org/wiki/Pelé%C3%A9>