

A Numerical Tribute to Joseph M. Pettit for his Centennial Birthday

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Joseph Mayo Pettit, born on July 15, 1916 in Rochester, Minnesota and died on September 15, 1986 in Atlanta, Georgia, was an engineer who served as the dean of the Stanford University School of Engineering from 1958 to 1972 and the president of the Georgia Institute of Technology between 1972 and 1986 [1]. First as a graduate student (M.S. in electrical engineering in 1940 and Ph.D. in 1942) and later as a professor at Stanford, Pettit was a protégé of the former engineering dean Frederick E. Terman (1900-1982) who had a major influence in founding the network of technology companies, Silicon Valley, on the San Francisco Peninsula [2]. During his fourteen-year tenure as president of Georgia Tech Institute of Technology, both undergraduate and graduate enrollment increased by forty percent [3]. Under his leadership, the value of research contracts and grants received by Georgia Tech increased more than eightfold and Tech's research budget surpassed the \$100 million mark for the first time in its history. The Joseph Mayo Pettit Distinguished Service Award, conferred by the Georgia Tech Alumni Association is named after Pettit. Pettit was very active in American Society for Engineering Education (ASEE) and served as its President during 1972-73. He was awarded the Presidential Certificate of Merit in 1949 for his World War II contributions. He was elected a Fellow of the Institute of Radio Engineers (IRE) in 1954 and life member of Institute of Electrical and Electronics Engineering (IEEE) in 1982. He was awarded the 1983 IEEE Founders Medal for contributions in electronic and engineering education, for leadership in engineering organizations, and for service to the world as an advisor to government and industry [4].

This year, July 15 marked Pettit's 100th birthday and September 15 marks the 30th anniversary of his death. In his memory, I constructed the following centennial birthday brainteasers:

1. Based on the day/month date format, Pettit was born on 15 July (15/7 or simply 157) and died on 15 September (159). Interestingly enough, twice 157 put side by side with 159 yields 314159, that is, the first six digits of number pi.
2. If numbers 1 to 26 are assigned to the letters of the English alphabet as A being 1, B being 2, C is 3, etc., the numbers assigned to Pettit's first name *Joseph* add up to 73. Note that the reverse of 73 is 37 and the 37th prime number is 157 representing Pettit's birth date, 15 July.
3. The numbers assigned to the letters of *Joseph Pettit* add up to 163 and 163 is the 38th prime number that comes after the 37th prime number 157 (15 July).
4. Also, 38 equals twice 19 where 19 square is 361, which coincidentally is the reverse of 163 (*Joseph Pettit*). Additionally, the sum of the numbers assigned to the letters of *Joseph Mayo Pettit* equals 217 with prime factors 7 and 31 which also add up to 38.
5. Pettit's 100th birthday coincides with the 197th day of 2016 where 197 is the 45th prime number where reverse of 45, namely 54, coincides with the sum of the numbers assigned to the letters

of Pettit's middle name *Mayo*. Further, the product of the digits of Pettit's birth year also yields $1 \times 9 \times 1 \times 6 = 54$.

6. The sum of the digits of 1916 (Pettit's birth year) and 197 (representing the 197th day of 1916 when Pettit was born) each equals 17 where the 17th prime number is 59. Twice 59 equals 118 and the reverse of 59, namely 95, put side by side with 96 which is the number following 95 yield 9596. Now go ahead and intertwine numbers 118 and 9596: 9151986, the date when Pettit died. (Also, note that if 1916 is split as 191 and 6, these two numbers add up to 197.)
7. If Pettit's birth year 1916 is split as 1 and 916, the difference of these two numbers result in 915 representing September 15, the day when Pettit died.
8. The sum of 715 (Pettit's birth date, July 15) and 915 (the day Pettit died, September 15) yields ten times 163 where again, 163 represents *Joseph Pettit*.
9. Pettit's birth date 7151916 and the day he died expressed as 9151986 have an interesting numerical connection. How so? Split 7151916 as 7, 1519, and 16, and split 9151986 as 91519 and 86, respectively. Note that 1519 equals the rightmost four digits of 91519. It also equals the reverse of the leftmost four digits of 91519. In addition, 7 plus reverse of 16 yields 68 which is the reverse of 86.
10. Pettit's wife, Florence Rowell Pettit, was born on February 27, 1915 and died on April 25, 1994, at age 79. If her birth date 227 (February 27) is reversed, 722 equals twice 361 where the reverse of 361 is 163 (*Joseph Pettit*).
11. The sum of the numbers assigned to the letters of *Florence Rowell* also equals 163 (*Joseph Pettit*). Also, the product of the digits of her birth year yields $1 \times 9 \times 1 \times 5 = 45$ which is the reverse of 54 (*Mayo*).
12. Pettit's 100th birthday is also special since the difference of 715 and 915 equals twice 100.
13. Also, 100 equals 30 plus 70 and interestingly enough, Pettit died 30 years ago at age 70.
14. Pettit's 101st birthday next year will occur on 7/15/17 where 101 and 71517 are both palindrome numbers.

Happy centennial birthday to Joseph Pettit!

[1] Joseph M. Pettit, Wikipedia

https://en.wikipedia.org/wiki/Joseph_M._Pettit

[2] AP: "Dr. Joseph M. Pettit, President of Georgia Tech, is dead at 70," *The New York Times*, p. B6, September 16, 1986.

[3] W. Kays, O. Villard, Jr., and W. Rambo, "Joseph Mayo Pettit," Memorial Tributes: National Academy of Engineering, Vol. 3, pp. 284-289, 1989.

[4] Joseph M. Pettit Biography, Engineering and Technology History Wiki, last updated on February 1, 2016.

http://ethw.org/Joseph_M._Pettit