

What were They Thinking?!

A Snapshot of Life in 1915

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1. Mathematicians Alice T Schafer (one of the founders of the Association for Women in Mathematics), Richard Hamming (whose contributions include the Hamming code), G. S. Young, Jr. (33rd President of the MAA), Ian Niven (40th President of the MAA), and Lee Lorch (who also was an early civil rights activist) were born, and Dorothy Lewis Bernstein (38th and first woman President of the MAA) turned one.
2. Three hundred thirty-six new words appear in the *Oxford English Dictionary*, including “bullshit,” “cushy,” “human resources,” “narcissistic,” and “wino.”
3. Claude Debussy composed his notoriously difficult piano *Études*.
4. College enrollments topped 350,000 in the US (up from 150,000 in 1890).
5. Other notable births that year included jazz singer Billie Holiday; actor and director Orson Welles; guitarist, songwriter, and inventor Les Paul; actress Ingrid Bergman; playwright and essayist Arthur Miller; and singer and actor Frank Sinatra.
6. Harvard’s annual tuition was \$160.
7. San Francisco was home to the Panama Pacific International Exposition, a world’s fair held to celebrate the completion of the Panama Canal.
8. Most university mathematics faculty did not hold PhDs in mathematics.
9. Everyone’s Erdős number was infinite (Paul Erdős was 2).
10. Master illusionist known for his sensational escape acts, Harry Houdini nearly died while trying to perform his buried alive stunt in which he was buried, without a casket, in a pit of earth six feet deep.
11. Twenty-eight PhDs in mathematics were awarded from ten US universities, led by Chicago with eleven and Harvard with five. Four of the twenty-eight were awarded to women.
12. While radios had been invented by 1915, they were not commercially available for use at home.
13. D.W. Griffith pioneered many new film techniques in *Birth of a Nation*, one of the first full-length feature films created in the United States.
14. Mathematics majors at the University of Pennsylvania required six courses, as did majors at the University of Nebraska. At Nebraska, math majors were required to have a second major, or minors in both a science and in one of French, German, Latin, or Philosophy.
15. The cost of a new home averaged \$3,200; a gallon of gas, \$.25; a gallon of milk, \$.36 (equivalent to about \$75,000, 5.86, and 8.44, respectively, today).
16. There were 62 countries in 1915 (196 today).
17. Music had long been available on mass-produced phonograph or gramophone cylinders and discs.
18. Math was an elective subject in many high schools. (Math was not even listed as a subject area in an influential 1918 National Education Association report.)
19. Italy joined the Allies in The Great War, later known as World War I.
20. A person needing to perform a calculation used a slide rule and/or a comptometer, a key-driven mechanical adding machine (electronic calculators had not yet been invented).
21. Of the general population aged 25 or older, 13.5% had at least a high school diploma.
22. Srinivasa Ramanujan was collaborating with G. H. Hardy in England.
23. Most films were shown in nickelodeons, small storefront theaters that typically consisted of wooden chairs, a screen hung on the back wall, and a pianist to play the soundtrack of the (silent) films.
24. The RMS Lusitania, a transatlantic British passenger ship, was sunk by a German U-boat near Ireland, killing 1198 passengers.
25. Pressures about entrance requirements for first-year college students caused the development of regional and national testing programs.
26. *In Flander’s Field*, a popular war poem, was penned by Canadian physician John McCrae.
27. The American Statistical Association had just celebrated its 75th anniversary in 1914.
28. Typhoid Mary was placed in quarantine after infecting 25 people at Sloane Hospital for Women in New York City.
29. Kraft processed cheese was developed.
30. Postage for a first-class letter was 2 cents (equivalent to \$.47 today).

31. Ninety-four of the colleges on Forbes Top 100 Colleges list had already been founded, with the exception of: UCLA, US Air Force Academy, Harvey Mudd College, Scripps College, Brandeis University, and Sarah Lawrence College.
32. Women's hemlines crept up to a scandalous mid-calf height.
33. The first stone of the Lincoln Memorial was put in place.
34. Only 1.5% of American high school students took a trigonometry course; 26.5% took a course in geometry.
35. Einstein's theory of general relativity was formulated.
36. The one-millionth Ford car was produced.
37. Woodrow Wilson became the first U.S. president to attend a World Series game; players on the winning Red Sox team each received \$3,700.
38. The *Theory of Pangaea* was published by Alfred Wegener.
39. Mathematics enrollments in universities were low because most colleges and universities in the US had gone to an all-elective curriculum.
40. The Studebaker brothers, though manufacturing early automobiles, were still making horse-drawn vehicles.
41. The first installment of the long-running comic strip *Freckles and His Friends*, which appeared in newspapers until 1971, was published.
42. The first commercially successful electric refrigerator, the "Guardian," debuted.
43. Mathematician Gaston Julia was struck in the face by a bullet during a battle between France and Germany.
44. George Bellows (an American realist painter), Marc Chagall (a Russian modernist painter), Ernst Ludwig Kirchner (a German expressionist painter), Henri Matisse (a French Fauvist painter), and Diego Rivera (a Mexican muralist and painter) created new works of art.
45. The first-ever stop sign appeared in Detroit.
46. The 416 students entering Yale in the fall of 1915 had a 72% "survival rate" to graduation.
47. The Peerless Quartet was the most popular music group of the decade, with hits like "Let Me Call You Sweetheart" and "I Didn't Raise My Boy to Be a Soldier."
48. Pluto was photographed for the first time but was still not listed as a planet.
49. G.H. Hardy and M. Riesz's "The General Theory of Dirichlet's Series" appeared.
50. A university mathematics major for a well-prepared student may include: College Algebra and Analytic Geometry in year one; Differential and Integral Calculus in year two; Differential Equations, Advanced Calculus (in large part Multivariable Calculus) and Theory of Equations in year three; and Functions of a Real Variable and Higher Geometry senior year.
51. A Nobel Prize was awarded in Chemistry for plant pigments, including chlorophyll, to Richard Willstätter.
52. Publications that year included *The Metamorphosis* (Franz Kafka); "The Love Song of J. Alfred Prufrock" (T.S. Elliot); *Of Human Bondage* (W. Somerset Maugham); *The Thirty-nine Steps* (John Buchan); and the final Sherlock Holmes novel, *The Valley of Fear* (Arthur Conan Doyle).
53. The longest mathematics PhD dissertation in 1915 was 1923 pages, and the shortest was only 5 pages.
54. The most expensive textbook in print in any discipline was Albert E. Church's *Elements of Descriptive Geometry*, which sold for \$2.50.
55. The US House rejected a proposal to give women the right to vote.
56. The world population was 1.8 billion. (It is well over 7 billion now.)
57. Colorado's Rocky Mountain National Park was founded.
58. The leading causes of death in 1915 were pneumonia, influenza, and nephritis (an inflammation of the kidneys).
59. William Mills patented, developed and manufactured the Mills bomb, a hand grenade, at the Mills Munition Factory in Birmingham, England.
60. Emmy Noether proved her theorem that any differentiable symmetry of the action of a physical system has a corresponding conservation law.
61. Women began cutting their long hair into much shorter "bobs."
62. The mathematical offerings at Carleton College included six pre-calculus courses, two years of calculus, and six courses above calculus: Selected Subjects in Algebra and Trigonometry, Surveying, History of Mathematics, Teachers' Course, Theory of Equations, Differential Equations.
63. Fannie Farmer, author of one of America's most popular cookbooks which is still in print to this day, died.
64. Wacław Sierpiński described the Sierpinski triangle.
65. The Philippines was an American colony.

66. The oldest modern mathematics competition, the Eötvös Competition, was held in Hungary; one of the three problems was "Prove that a triangle inscribed in a parallelogram has at most half the area of the parallelogram."
67. *Very Good Eddie*, with music by Jerome Kern, was a Broadway hit at the new Princess Theatre.
68. Ernest William Brown, a British mathematician at Yale University, was the President of the AMS, with Vice-President Oswald Veblen, an American mathematician at Princeton University.
69. The median age of the population in the US was 24.1 (37.6 today).
70. Sylvanus Thompson had a popular calculus textbook with the extraordinary title *Calculus Made Easy: Being a Very-Simplest Introduction to those Beautiful Methods of Reckoning which are Generally Called by the Terrifying Names of the Differential Calculus and the Integral Calculus*.
71. A Nobel Prize was awarded in Physics to the father/son team of William Henry Bragg and William Lawrence Bragg for their analysis of crystal structures by means of x-rays.
72. The Vancouver Millionaires swept the Ottawa Senators to win the Stanley Cup.
73. Booker T Washington, educator, author, orator, advisor to presidents of the United States, and leader in the African-American community, died.
74. The National Advisory Committee for Aeronautics, the predecessor of NASA, was established in the United States.
75. Among those receiving PhDs in mathematics were Ralph Fowler, future advisor of Garrett Birkhoff and Paul Dirac, James Alexander (under Oswald Veblen) who created the Alexander polynomial, and four women: Olive Hazlett (under L. E. Dickson), Eula Weeks King (under E. R. Hedrick), Caroline Seeley (under Edward Kasner), and Mary Evelyn Well (under E. H. Moore).
76. Dwight Eisenhower and Omar Bradley graduated from USMA, West Point.
77. Babe Ruth hit his first home run as player for the Boston Red Sox.
78. Life expectancy for males was 52.5 years, 56.8 for females.
79. One could buy a fashionable car, the high-wheel motor buggy, through the Sears catalog.
80. The average weight of a freshman at Yale in 1915 was 143.1 pounds; his average height was 68.7 inches.
81. The first coast-to-coast telephone call was placed by Alexander Graham Bell in New York City to his former assistant Thomas Watson in San Francisco.
82. Hermann Weyl was conscripted into the German army, and Elie Cartan was drafted into the French army.
83. The Raggedy Ann doll was patented.
84. Bayer aspirin became available in tablet form, without a prescription.
85. The US Revenue Cutter Service and the US Life-Saving Service were consolidated into the new military branch, the US Coast Guard.
86. New volumes were published in several beloved children's book series, including *Anne of the Island* (Montgomery), *The Scarecrow of Oz* (Baum), and *Pollyanna Grows Up* (Porter).
87. Kazimir Malevich originated the Suprematist movement in art, which focused on basic geometric objects painted with a limited color palette.
88. Richard Strauss debuted his last symphonic poem, *An Alpine Symphony*.
89. The Allied forces fought the ill-fated Gallipoli Campaign against the Ottoman Empire, eventually leading to more than 100,000 casualties and more than 200,000 wounded.
90. Germany made the first large-scale use of poison gas as a weapon at the Second Battle of Ypres.
91. The population of Phoenix was 11,134 (over 1.5 million today), and the population of Florida was 923,000 (over 19.5 million today).
92. Charlie Chaplin's film *The Tramp* was released, featuring his iconic character "The Little Tramp."
93. The average annual wage in the US was \$687 (equivalent to about \$16,100 today).
94. The most popular baby names in the US were John and Mary.
95. Georges Claude patented the neon discharge tube for use in advertising.
96. A mid-range pair of women's shoes cost from \$7 to \$10 (equivalent to about \$163-\$233 today).
97. Ethiopia and Liberia were the only independent African nations; the rest of Africa consisted of European colonies.
98. A passenger ship, the SS Eastland, tied to a dock in the Chicago River, rolled over killing 844 passengers and crew.
99. In an attempt to reinstate monarchy in China, President of the Republic of China Yuan Shikai declared himself Emperor.

100. On December 30-31 at Ohio State University, 104 delegates representing the US and Canada came together to address the issue earlier described by Herbert Ellsworth Slaught that “the great intermediate field of collegiate mathematics... so far has had no organized attention.” From this was formed the Mathematical Association of America.