COHEN, Teresa. February 14, 1892–August 10, 1992.

GOUCHER COLLEGE (BA 1912), JOHNS HOPKINS UNIVERSITY (MA 1915, PhD 1918).

Teresa Cohen was born in Baltimore, Maryland, the daughter of Rebecca (Sinsheimer) (b. 1856) and Benjamin Cohen (b. 1855), natives of Maryland. She was the eldest of four children; her younger siblings were Simon (1894–1977), Martha (1896–1978), and Hilda (1898–2000). Her father was a wholesale shoe merchant.

Cohen graduated from Friends School in Baltimore in 1909 before entering Goucher College from which she graduated in 1912 as a member of Phi Beta Kappa. Her two sisters also graduated from Goucher; Martha became a social worker, and Hilda became an attorney. Her brother, Simon, studied at the Johns Hopkins University and received his bachelor's degree from the University of Cincinnati. He then was ordained a rabbi by, and later received a Doctor of Divinity degree from, Hebrew Union College in Cincinnati; he spent most of his career engaged in academic work.

In 1912 Teresa Cohen entered Johns Hopkins with a resident fellowship for the year 1912–13. After she received her master's degree in 1915, she was made a university scholar at Johns Hopkins for the year 1915–16 and was a fellow 1917–18. In her dissertation she thanks not only her advisor, Frank Morley, but also A. B. Coble, Abraham Cohen, and two of her teachers at Goucher, Clara L. Bacon and Florence P. Lewis. Her minor subjects were physical chemistry and chemistry.

After receiving her PhD in 1918, Cohen went to the University of Illinois for the year 1918–19 as an instructor. She also taught courses at Johns Hopkins during the summers of 1918, 1919, and 1920. In the fall of 1920, the chairman of Pennsylvania State College (now University) found himself in need of another instructor and remembered that Abraham Cohen, Teresa Cohen's uncle and one of his former teachers at Johns Hopkins, had mentioned that his niece was available for employment. Thus, in September 1920 Teresa Cohen became the first woman on the mathematics faculty at Penn State. She said in a 1979 interview, "I used to stay out of the way and hope that if I wasn't a nuisance they'd get some more women" (Hale). Over the years a number of women joined Cohen and stayed at Penn State; these include Aline Huke Frink, Beatrice Hagen, and Helen Owens. In the late 1930s, Owens, who was not yet on the faculty because she was the wife of the chairman of the department, formed the Committee for Study of Women's Work in Mathematics, for which Cohen served as chairman. That committee arranged a luncheon honoring early American women mathematicians at the mathematics meetings held in State College in September 1937. Also at those meetings, Cohen performed a violin sonatina at a concert held one evening.

Cohen remained on the faculty of Penn State until she was forced to retire at age seventy. She was promoted to assistant professor in 1921, to associate professor in 1938, and to professor in 1945. In 1956 the department published notes on "Basic Algebra and Trigonometry" that she had written with two colleagues, Walter J. Harrington and Frank Kocher.

After her retirement, Cohen held the title professor emeritus, taught some classes, and worked as an unpaid volunteer, tutoring students who had problems with mathematics. She continued to tutor on a regular basis for twenty-four years until a serious accident in early 1986 prevented her from doing so. A car lost its brakes and pinned her against her house causing her severe damage from which she never

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completely recovered. After several months in the hospital and in rehabilitation in Pennsylvania, her family moved her to a nursing home in Pikesville, Maryland, where she lived until her final illness.

Both before and after the accident, Cohen was recognized for her contributions to Penn State and its mathematics department. In November 1979, the alumni association of the Lion's Paw Senior Honor Society, a group that recognizes student leaders at Penn State, presented Cohen with its Lion's Paw Medal for extraordinary service to the university. In 1982 the department created the Teresa Cohen Service Award, which is presented biannually on, or close to, Cohen's Valentine's Day birthdate; the award is given to one faculty member at the main campus and another at one of the other campuses in the university system. After Cohen's accident, her niece and nephew contributed to the establishment in 1987 of the Teresa Cohen Tutorial Endowment Fund in the mathematics department. In 1991, a year before Cohen's death, the department established the Sperling-Cohen tutoring program for first-year calculus that bears her name along with that of a 1936 alumnus who contributed generously to the department's tutoring program. The head of the department in 1992, Jerry Bona, said "One of her greatest gifts to us was that she showed us what to do and how to do it. We are merely following her example" (Ferguson 1992).

Cohen was active in Sigma Delta Epsilon (now Sigma Delta Epsilon/Graduate Women in Science) and was national treasurer from 1954 until 1963, a year after her retirement from teaching. At the time of her retirement, the Sigma Delta Epsilon News reported that "one of her great loves is music and she goes to as many concerts as she can. She plays the violin and continues to take lessons during summer vacations. She says, 'I am not much of a player, but I do have a lot of fun.'" She started her violin lessons at age ten and continued them until age eighty-five. She spent her summers at a home in the Baltimore area that she maintained at least through 1979, when she remarked that "Pennsylvania is like a family you're married into but Maryland is kinfolks" (Hale).

Teresa Cohen died of pneumonia at Sinai Hospital in Baltimore, Maryland, in 1992, almost six months after celebrating her one hundredth birthday. She is buried at the Oheb Shalom Cemetery in Baltimore. She was survived by her youngest sister, a nephew and two nieces, as well as grandnieces, grandnephews, greatgrandnieces, and great-grandnephews.

Organizational affiliations: AMS, MAA, Phi Beta Kappa, Sigma Delta Epsilon.

Thesis and dissertation:

1915 Preliminaries to the obtaining of the conic determined by a line ξ and the four tangents at its intersections with a plane quartic. MA thesis, Johns Hopkins University. Handwritten

1918 Investigations on the plane quartic. PhD dissertation, Johns Hopkins University, directed by Frank Morley. Handwritten. Printed version, 1919, Baltimore, MD, reprinted from Amer. J. Math. 41:191–211.

Publications:

1916 The asymptotic equation and satellite conic of the plane quartic. *Amer. J. Math.* 38:325–36. Reviews: *JFM* 46.0155.02 (F. Gonseth); *JFM* 46.0953.02 (W. Fr. Meyer); *Rev. semestr. publ. math.* 25, pt. 1: 6 (E. B. Cowley).

1917a The Cayleyan curve of the quartic. *Proc. Nat. Acad. Sci. U.S.A.* 3:447–50. Review: *Rev. semestr. publ. math.* 26, pt. 2: 7 (D. J. Korteweg).

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1917b A comitant curve of the plane quartic. Amer. J. Math. 39:221–32. Reviews: JFM 46.0953.03 (W. Fr. Meyer); Rev. semestr. publ. math. 26, pt. 1: 1 (E. B. Cowley). Presented as "On a concomitant curve of the planar quartic" to the AMS, New York City, 28 Dec 1916; abstract: Bull. Amer. Math. Soc. 23:272–73 #29.

1919 Investigations on the plane quartic. Amer. J. Math. 41:191–211. Published version of PhD dissertation. Reviews: JFM 47.0604.02 (W. Fr. Meyer); Rev. semestr. publ. math. 28, pt. 1: 1–2 (E. B. Cowley).

1956 with W. J. Harrington and F. Kocher. *Basic Algebra and Trigonometry*. University Park: Department of Mathematics, Pennsylvania State University.

1979 with W. J. Knight. Convergence and divergence of $\sum_{n=1}^{\infty} 1/n^p$. Math. Mag. 52:178.

Abstract not listed above:

1920 The representation of fractions of periods on algebraic curves by means of virtual point sets. *Bull. Amer. Math. Soc.* 26:258 #35. Presented to a meeting of the AMS, New York City, 30–31 Dec 1919.

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"SDE Features Dr. Teresa Cohen." Sigma Delta Epsilon News, May 1962.

"One of First Woman Math Professors Is Student in Retirement." Williamsport (PA) Sun-Gazette, 27 Apr 1966.

Hale, Barbara. "Matriarch of Mathematics: Teresa Cohen – Still Calculating at 86!" *Penn Stater*, Jan/Feb 1976, 1.

"The Good Old Days Remember When ... with Dr. Teresa Cohen, Professor Emerita of Mathematics." Science News (Pennsylvania State University), #6, Fall 1977.

"At 86, Dr. Cohen Still Works Daily Tutoring Students." *Penn State Intercom*, 9 Nov 1978.

Ferguson, Janice M. "Teresa Cohen's Legacy." Science Journal (Penn State Eberly College of Science Alumni Society) 19, Spring 1992, 9.

"Teresa Cohen Math Professor." (Obituary) Baltimore Sun, 12 Aug 1992.

"Teresa Cohen, Pioneer Female in Math." (Obituary) Harrisburg (PA) Evening News, 14 Aug 1992.

Related manuscript materials:

Teresa Cohen Papers, 1928–1986. University Archives/Penn State Room, University Libraries, Pennsylvania State University.

Other sources: MA thesis biographical sketch 1915; PhD dissertation vita 1918; Owens Papers; author's correspondence with Teresa Cohen, May 1977; conversation between author and relatives, 6 Feb 1992; Cockey, "Mathematics at Goucher"; WhoAm 38 (Cohen, Simon); Ferdinand Hamburger Archives, The Johns Hopkins University; US census 1900, 1910, 1920, 1930 MD; SSDI.

Last modified: March 6, 2009.