

MAYER, Joanna Isabel. March 6, 1904–February 28, 1991.

DOMINICAN COLLEGE OF SAN RAFAEL (BA 1927), MARQUETTE UNIVERSITY (MA 1928, PhD 1931).

Joanna Isabel Mayer was born in Pettis County, near Sedalia, Missouri, the third of five children of Anna (Poinsignon) (1871–1960) and Edward John Mayer (ca. 1869–1941), both born in Missouri. Her parents, of farm families, continued to farm after their marriage in Sedalia in about 1897. Her siblings were Emil Joseph (1898–1967), Mary Helen (Ella) (1902–1981), Francis Nicholas (1906–1995), and Elizabeth (1909–1989). Census records indicate that in 1910 the family was living in Dresden Township, near Sedalia, Missouri, and Edward Mayer was a farmer; in 1920 the family was living in Portland, Oregon, where he was a farmer and a laborer; in 1930 they were living in Salina, Kansas. No occupation was indicated for her father, but Joanna Mayer was listed as a parochial school teacher.

Letters written in 1984 and 1985, when Joanna Mayer was about eighty years old, describe her family's many moves and the schools she attended before she entered college. There is also sketchy material about places she lived and jobs she held. It has been impossible to confirm all of the details.

It appears that the only schools she attended were Catholic schools, and later she only taught in such schools. She first attended the Sacred Heart school in Sedalia, Missouri. In about 1917 the family moved to Hollywood, California, where she and Ella attended Cathedral High School. After the "great flu" they moved to Phoenix, Arizona, where her father and brother sold cars. They moved back to Los Angeles, from there to San Jose, and then to Portland, Oregon, for a year. It has been confirmed that she was in the first academic class at St. Mary's Academy in Portland during the school year 1919–20, when she was fifteen years old. Joanna Mayer reported that the family then moved to Seattle, then briefly to Spokane, and then to Kansas City, Missouri, where she went to Loretto High School, a Catholic girls' school. They moved to Florida and ended up in Nashville, Tennessee, where she went to St. Bernard's High School. From there they moved to Kansas City and then to Salt Lake City, and back to San Jose, in the San Francisco Bay area, where, with some interruptions, she and some members of her family were to spend much of the remainder of their lives.

According to records at Dominican College in San Rafael, California, Joanna Mayer graduated from Notre Dame High School in San Jose before entering Dominican College for her undergraduate work. Apparently the family first lived in Oakland and then in San Rafael while she attended college. Mayer indicated that she started to study mathematics while in Oakland and started to major in mathematics her second year in college. In May 1927 Mayer received her BA degree from Dominican College with a major in mathematics and a minor in philosophy. While there she was influenced by [Anna Marie Whelan](#), who taught at Dominican 1925–27 before moving to a position at Hunter College.

Mayer's older sister, Mary Helen Mayer, also attended Dominican College in San Rafael and earned a bachelor's degree in 1926. She earned a master's degree from Marquette University in Milwaukee, Wisconsin, in 1928 with a thesis, "The Educational Theories of St. Thomas Aquinas." It appears from correspondence with Joanna Mayer that her sister Mary Helen taught at Dominican College for a while.

Her youngest sister received a bachelor's degree from Clarke College, a Catholic college in Dubuque, Iowa, in 1932.

Mayer entered Marquette University graduate school in 1927 and remained enrolled until 1931; she received the MA degree in June 1928. In the preface to her master's thesis she wrote, "The choice from the field of Invariants of a topic for a thesis grew out of an interest in the subject which my major Professor at Dominican College, San Rafael, California, inspired in the last course I had the privilege of taking from her. To Dr. Anne Marie Whelan, then, I owe my first acknowledgment of gratitude." Mayer's election to membership in the MAA was announced in the June 1930 issue of the *Monthly*, and her position, presumably for the 1929–30 academic year, was described as head of the department at Marymount College in Salina, Kansas, where she and her parents were living. In June 1931 she received her PhD, the first awarded by Marquette in mathematics. Her dissertation was directed by H. P. Pettit, who had also directed her master's thesis.

Mayer's dissertation begins:

[Ruth Gentry](#) introduces her dissertation On the Forms of Plane Quartic Curves as follows:

"Many papers dealing with curves of the fourth order, or Quartic Curves, are to be found in the various mathematical periodicals; but these leave the actual appearance of the curve as a whole so largely to the reader's imagination that it is here proposed to give a complete enumeration of the fundamental forms of Plane Quartic Curves as they appear when projected so as to cut the line infinity the least possible number of times . . . , together with evidence that the forms presented can exist."

It is the purpose of my dissertation to show whether it is possible to derive, and how to construct, all of the forms proposed in Gentry's dissertation by the method used by Doctor H. P. Pettit in his "Projective Description of Some Higher Plane Curves."

Mayer's dissertation ends with a description of those curves enumerated by Gentry that she succeeded in generating.

Joanna Mayer's name appears on the November 1931 MAA membership list with an address in Sedalia, Missouri. By some time in 1932 she is apparently a teacher in San Jose, California. In 1937–38, Joanna Mayer was an instructor at Seton Hill College (now Seton Hill University), a Catholic school in Greensburg, Pennsylvania, and at that time a women's college. Articles in the Seton Hill alumnae magazine and the student newspaper indicate that she was there to replace a faculty member on leave for the year for graduate study. They report that she had come from San Francisco College for Women, a Catholic college in California that is now closed, and that she had previously taught at Saint Mary-of-the-Woods and at Clarke College. In a March 15, 1938, article, "Please! Dr. Mayer is Math Professor, Not a Freshman!" in the *Setonian*, the Seton Hill student newspaper, she is described as "brimming over with enthusiasm for Saturday morning hikes and moonlight toboggan slides." . . . "Enthusiastic, peppy and eager as she is, she cannot imagine what Seton Hill does without the Pacific Ocean. 'Don't you really miss surf riding?' was her closing remark to the reporter for *Setonian*."

Mayer's next position was at Xavier University in New Orleans (now Xavier University of Louisiana), the only Catholic institution among the historically black colleges and universities. Material from the Xavier archives includes correspondence related to her position there. In an inquiry of January 1939 from Sedalia, Missouri, to Xavier University, Mayer wrote that she had read with interest their monthly bulletin about the education of "colored young people." She noted that her sister Mary Helen had written to them before but that at the time she, Joanna, "was not well enough to teach large classes." She reported that she was stronger and "would be willing to teach nine or ten hours of Mathematics for the equivalent of board and room and a little spending money, providing by doing so I would be of assistance to your Xavier University. I do not have an appointment for this semester, not that I could not make myself useful at home, but it seems a little selfish to stay at home when I could be of some use to a Catholic college." She wrote that she had taught in well-known Catholic colleges for eight years. She also indicated that she had taught chemistry and education but preferred mathematics and appended a list of courses she had taught. The list includes most courses in the standard undergraduate curriculum plus modern geometry, higher plane curves, advanced calculus, theory of equations, history of mathematics, modern algebraic theory, projective geometry, and invariants.

In August 1939 Mayer received a letter from the president of Xavier University indicating that their mathematics teacher had asked to be released and inviting her to come under the terms she had suggested in her earlier letter. Thus, Mayer began teaching at Xavier in autumn 1939 at about \$85 per month, which was to include room and board, "not as salary, . . . but as the compensation which would be agreeable to [her]." During the summer of 1940 she was at home in Sedalia, Missouri. A letter of August 1 inquired whether her services would be wanted at Xavier in the fall.

Mayer did return to Xavier for the 1940–41 academic year, but she wrote in February 1941, indicating that her services would not be available after June. She returned to Sedalia, where her father was suffering from cancer. Mayer expressed the hope that they could get back to Oakland, California, by September but was doubtful that her father's health would be good enough for travel. She remained in Sedalia, where he died late in December. Mayer indicated that her mother sold the eighty-acre farm in Missouri, and she and her mother moved to San Jose.

In a letter to Xavier in the summer of 1942 she mentioned that she hoped to teach at Stanford, but they did not know for certain whether they would need her. She also noted that her mother had grandchildren in the San Francisco Bay area. In August 1942 Mayer wrote to Xavier that she had an offer of a position at San Jose State College but needed a junior college credential; in order to make application for that credential she needed a letter verifying her teaching experience. This she received from Xavier, but it appears that she did not teach anywhere during the year 1942–43. Mayer wrote in a letter to the Marquette graduate school dean in 1956 that she left teaching in 1942 and had supported herself since by buying and selling stocks. It is not clear from Mayer's letters written in the 1980s how she spent the rest of her life, although listings in the AMS and city directories indicate that after she returned to California following her father's death, she spent most of the rest of the 1940s in Santa Clara, California, working at least some of the time as a stenographer.

Mayer wrote in 1985 that during World War II she served in Washington, D.C., and that in 1950 she did secretarial work for the Guided Missiles Committee, Department of Defense, Pentagon, Washington, D.C. She also wrote that she worked for over thirteen years in military pay, etc. at the military personnel records center in St. Louis. We have not been able to confirm this information.

At various times during her life, Mayer was unable to work because of illness. She was a devout Roman Catholic who lived much of the latter part of her life in San Jose, California. She died at the San Jose Medical Center of cardiac arrest in 1991, two days after having had a mastectomy and a week before her eighty-seventh birthday. Mayer is buried at the Santa Clara Mission Cemetery in California.

Organizational affiliations: AMS, MAA.

Thesis and dissertation:

1928 A geometric interpretation and classification of the invariants of the binary and ternary conics and cubics. MA thesis, Marquette University, directed by Harvey Pierson Pettit. Typescript.

1931 Projective description of plane quartic curves. PhD dissertation, Marquette University, directed by Harvey Pierson Pettit. Typescript. See also **1932**.

Publication:

1932 Projective description of plane quartic curves. *Tôhoku Math. J.* 36:1–21. Published version of PhD dissertation. Reviews: *JFM* 58.0700.03 (M. Steck); *Zbl* 005.21612 (G. Schaake).

Other sources: MA thesis preface 1928; application for social security number 1962; correspondence with Smithsonian Institution and with author 1984, 1985; Xavier University Archives (via Susan Korn); communications with Clarke College Archives, Dominican College Archives, Marquette University Archives, Seton Hill University Archives, and with St. Mary's Academy; US Census 1900, 1910 MO, 1920 OR, 1930 KS; California death certificate; SSDI.

Last modified: July 20, 2009.