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Lawrence A. D'Antonio* (ldant@ramapo.edu), Mathematics Department, Ramapo College of New Jersey, 505 Ramapo Valley Rd., Mahwah, NJ 07430. *How Euler Solved the Problem of the Virgins.*

In spite of his Calvinist upbringing Euler was able to successfully resolve the "Problem of the Virgins" (or the "Rule of the Virgins" as Euler called it). The problem requires the solution in integers of two simultaneous linear equations. In this talk we will trace the origins of the problem (and its rather unusual name) in earlier arithmetic texts. We then examine Euler's use of his partition theory to solve the problem and subsequent developments found in the work of Cayley and Sylvester. (Received June 09, 2008)