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Harrison W. Straley* (straley_harrison@wheatonma.edu), 500 Elm St., Mansfield, MA 02048. *A Creative Way for High Schools to Serve Post AP Mathematics Students.*

Many high schools have students who complete BC Calculus by the end of their junior year. If the school has 15 or so such students they can offer Linear Algebra, Multi-Variable Calculus or some similar post-BC course without significant additional cost. Another option is for the students to schedule a course at a local college. Unfortunately, logistics often make this option unacceptable. Many schools have only a few such accelerated students and a local college is simply not an alternative. How can such a school meet the mathematical needs of these talented and deserving students without significant additional costs? A highly successful program to meet the needs of such students is described in this paper. Not only does the school offer a program for these students, but other talented students are able to participate as well. Their program guides students to learn how to "do mathematics" as well as learn some abstract algebra. The students are guided to do "original, to them" mathematics research and to write "publishable quality" mathematics papers. For over twenty-five years the students earned 5s on the BC Exam, conjectured and proved LaGrange's Theorem and earned state wide recognition for their mathematics research. (Received September 14, 2007)