TRIUMPHS PSPs available for testing in Fall 2017

Descriptions of all PSPs available at: http://webpages.ursinus.edu/nscoville/(Numbered)%20IUSE%20Project%20Descriptions.pdf

Complete versions of some of the following are available at: http://webpages.ursinus.edu/nscoville/projects.html

To obtain a preliminary copy of any PSP not yet posted on the TRIUMPHS website, please contact: janet.barnett@csupueblo.edu

Full-length PSPs (number correlate with posted PSP Descriptions)	**Intended Course(s)**	**Author**
F 01. A Genetic Context for Understanding the Trigonometric Functions	Pre-calculus, History of Math., Math. Ed. Capstone Course	Danny Otero
F 03. Solving a System of Linear Equations Using Elimination	Linear Algebra	Mary Flagg
F 04. Investigating Difference Equations	Discrete Mathematics	Dave Ruch
F 05. Quantifying certainty: the p-value	Statistics	Dominic Klyve
F 06. Pythagorean Theorem and Exigency of Parallel Postulate	Geometry	Jerry Lodder
F 07. Failure of the Parallel Postulate	Geometry	Jerry Lodder
F 08. Dedekind and the Creation of Ideals	Abstract Algebra	Janet Barnett
F 09. Primes, divisibility & factoring	Number Theory	Dominic Klyve
F 10. The Pell equation in Indian Mathematic	Number Theory	Toke Knudsen & Keith Jones
F 13. Bolzano's Definition of Continuity, his Bounded Set Theorem, and an Application to Continuous Functions	Introductory Analysis	Dave Ruch
F 14. Rigorous Debates over Debatable Rigor in Analysis: Monster Functions in Introductory Analysis	Introductory Analysis	Janet Barnett
F 18. Construction of Figurate Numbers	General Education	Jerry Lodder
F 19. Pascal's Triangle and Mathematical Induction	General Education	Jerry Lodder
F 20. Investigations Into d'Alembert's Definition of Limit	Introductory Analysis	Dave Ruch
F 21. An Introduction to a Rigorous Definition of Derivative	Introductory Analysis	Dave Ruch
F 22. Investigations Into Bolzano's Formulation of the Least Upper Bound Property	Introductory Analysis	Dave Ruch
F 23. The Mean Value Theorem	Introductory Analysis	Dave Ruch
F 24. Abel and Cauchy on a Rigorous Approach to Infinite Series	Introductory Analysis	Dave Ruch
F 25. The Definite Integrals of Cauchy and Riemann	Introductory Analysis	Dave Ruch
F 26. Gaussian Integers and Dedekind Ideals	Number Theory	Janet Barnett
F 27. Developing an Understanding of the Quotient Group Concept	Abstract Algebra	Janet Barnett

Mini-PSPs (number correlate with posted PSP Descriptions)	**Intended Course(s)**	**Author**
M 01. Babylonian numeration	Elementary Education Courses / History of Mathematics	Dominic Klyve
M 03. Derivatives of trigonometric functions	Calculus I	Dominic Klyve
M 09. How to calculate π part 4: inverse tangents	Calculus 2	Dominic Klyve
M 10. How to calculate π part 5: An experimental needle	Geometry / Math Ed	Dominic Klyve
M 12: Gaussian Guesswork: Arc length & numerical approximation of integrals	Calculus 2	Janet Barnett
M 15: Gaussian Guesswork: Sequences & the Arithmetic-Geometric Mean	Calculus 2	Janet Barnett
M 17. Why be so critical? Origins of Analysis	Introductory Analysis	Janet Barnett
M 18. Topology from Analysis: Making the Connection	Topology / Introductory Analysis	Nick Scoville
M 19. Connecting connectedness	Topology	Nick Scoville
M 20. The Cantor set before Cantor	Topology	Nick Scoville
M 21. A compact introduction to a generalized Extreme Value Theorem	Topology	Nick Scoville
M 23. The closure operation as the foundation of topology	Topology	Nick Scoville
M 24. Euler's Rediscovery of e	Introductory Analysis	Dave Ruch
M 25. Henri Lebesgue and the Integral Concept	Introductory Analysis	Janet Barnett
M 26. Generating Pythagorean Triples via Gnomons	Elementary Education Courses / Number Theory	Janet Barnett