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*A Delightful Interconnection Encompassing Pythagorean Triples, Algebra, Geometry and Modular Arithmetic.* Preliminary report.

This paper will embark on a study of Pythagorean triples as they relate to the areas and perimeters of right triangles. For example, one can easily demonstrate a method to obtain right triangles whose areas are integer multiples of their respective perimeters. In addition, the role played by modular arithmetic in achieving our goal will be emphasized via easily posed conjectures that are based on the table of Pythagorean triples. Easily understandable proofs will be furnished in a setting that only requires a level of mathematical maturity that is obtained in elementary collegiate mathematics. (Received June 15, 2013)