

## Sample Essay 2 Outline

**Name:** Jane Student

**Title:** Pythagorean Triples

**Thesis statement:** Triples of whole numbers that are side lengths of right triangles can be found by sequence of elegant observations. The heart of the method uses a beautiful tool called stereographic projection.

### **Outline:**

1. Introduction
2. Statement of the problem
3. Transformation of the problem to a question about points on the unit circle
4. The main tool: the stereographic projection
5. Transformation of the problem to rationals on the positive real half-line
6. Final solution
7. Conclusion

### **Sources:**

Howard Eves, An introduction to the History of Mathematics

Alexander Bogomolny, Pythagorean Triples

<http://www.cut-the-knot.org/pythagoras/pythTriple.shtml>

William Casselman, The parametrization of Pythagorean triples

<http://www.math.ubc.ca/~cass/courses/m446-03/pl322/parametrization.html>

Eric Weisstein, Pythagorean Triple

<http://mathworld.wolfram.com/PythagoreanTriple.html>