



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Jack Cooper; Eric Reyes	Project Number S1403
Project Title Pythagorean Triples Found in the Quadratic Equation	
<p style="text-align: center;">Abstract</p> <p>Objectives To fully discover the relationship between the Pythagorean triples and the Quadratic equation.</p> <p>Methods The use of Pythagorean triples along with the application of the Quadratic formula in order to create a quadratic equation that has whole number components.</p> <p>Results The Pythagorean triple-related quadratic equations, when graphed, follow a trend along a seemingly invisible line, this line was named the string as it connects the parabolas together through the vertices. There were found to be more than one relation between the Pythagorean triples though, as the areas and circular arc of the parabolas were related as well. In summary, the parabolas are related to each other in a number of ways.</p> <p>Conclusions There are a handful of connections between Pythagorean triples, some of which are strings and areas. With this unique new connection of math that has yet to be touched on, based on the research, it can lead to a new discovery in the math community.</p>	
Summary Statement we were able to convert Pythagorean triples into a quadratic equation which yield parabolas in the end.	
Help Received None. We came up with equation on our own and tested it ourselves at home and at school.	