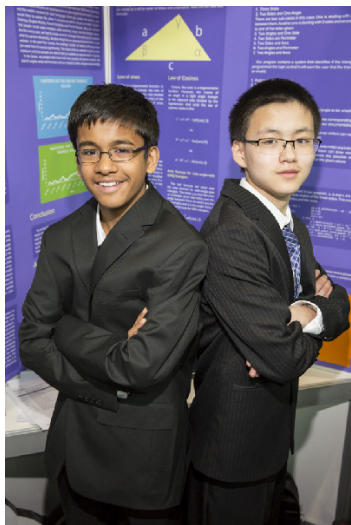


## CWSF 2015 - Fredericton, New Brunswick



### Daren Liang, Ishwar Desai

#### The Triangle Solver

**Challenge:** Innovation

**Category:** Intermediate

**Region:** River Valley

**City:** Fredericton, NB

**School:** Fredericton High School

**Abstract:** We have created a website that can solve a valid triangle given a combination of three angles, sides, perimeter, and/or area, using JavaScript. The solver uses trigonometric laws and formulas to calculate the triangles. It can solve triangles with one or two solutions and draw visual triangles. The website can be viewed on computers and mobile devices. You can visit the website at [www.triangle.altervista.org](http://www.triangle.altervista.org).

#### Biographies

**Daren** - When I was about 10 years old, I was very interested in mathematics. Everyday, I would practice my math skills and later I entered into math competitions that are Canada Wide. I did very poor at the start, but I did not give up. During middle school, I develop greatly my math and then won many awards nationally. In grade 8, I was very interested in Computer Science. Although at that time I did not know how to code but I knew it would be not easy to learn. I started out learning HTML & CSS (Web development) which is relatively easy, then learnt JavaScript and the basics of C++.

When my math teacher told us that we had to do a project about mat...

**Ishwar** - I have always been interested in mathematics. Throughout middle school, I participated in many mathematics competitions, and placed well in them. Then, when I started high school, I met up with Daren Liang, from another middle school, and we became part of the advanced math class in Fredericton High School. We had to do a project for this math class. Throughout middle school, Daren and I had learned about the Pythagorean Theorem that worked for right triangles. But we thought that there must be formulas that could help you solve triangles that don't have right angles. And so we created our triangle solver. Our triangle solver can solve the th...