

ESPC 2013 - Lethbridge (Alberta)



Helen Czapor

Of Prime Importance - Testing For Prime And Composite Numbers

Défi: Découverte

Catégorie: Junior

Région: Sudbury

Ville: Sudbury, ON

École: R.L. Beattie P.S.

Sommaire: Two methods of testing integers for primality were studied and compared. First, the trial division method was improved by avoiding unnecessary divisions. I found that at best a 63% improvement was possible, but that the time needed still grew exponentially. This makes it useless for primes over 40 digits. Second, the Miller-Rabin method was shown to work well on primes of 40000 digits or more.

Biographie

I am a grade eight student, and my favourite subjects are Math and Science. My hobbies include piano, squash, badminton, and origami. Although it is a long way off, I would someday like to have a job that involves some kind of Math or Science. My project was inspired by a quote from a famous mathematician, as well as my desire to combine math with computer programming. My advice to students that are thinking about doing a Science project would be to try to find a topic that really interests you. That way, it still feels like fun even when you are working hard.

Prix

Valeur

Prix de La Fondation actuarielle du Canada - Junior	500,00 \$
Prix d'excellence - Junior - Médaille d'argent	300,00 \$
Commanditaire: Sciences jeunesse Canada	
Bourse d'études de Western University	2 000,00 \$
Médaille d'argent - Bourse d'admission de 2 000 \$	
Commanditaire: Université Western	
Total	2 800,00 \$