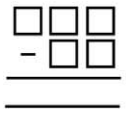
More than a maths competition

A SAMPLE OLYMPIAD

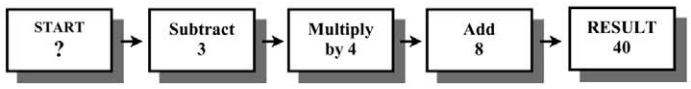
Time Limit 23 minutes

1. *Time: 3 minutes*
   In the subtraction problem below, all five of the digits 3, 5, 6, 7, and 9 are to be placed, one in each box. What is the smallest difference that can be the result?



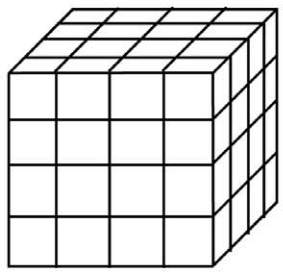
2. *Time: 5 minutes*
   Five brothers, each born in a different year, share a gift of $100 according to the following arrangement: each boy, except the youngest, gets $5 more than his next younger brother. How much does the youngest boy get?

3. *Time: 5 minutes*



4. *Time: 5 minutes*
   (1,1,9) is a triple of natural numbers whose sum is 11. We consider (1,1,9), (1,9,1) and (9,1,1) to be the *same* triple because each triple has the same three numbers. How many other triples of natural numbers have a sum of 11?

5. *Time: 5 minutes*
   Below is a 4 x 4 x 4 cubic block of wood. If all six faces of the cube are painted red and the cube is then cut into 1 x 1 x 1 cubes along the lines shown, how many 1 x 1 x 1 cubes will have red paint on just 2 faces?



For further information and the answers to these sample questions, please visit our website

www.apsmo.info

Children up to age 14 are welcome to take part in this year's mathematical Olympiad programme, designed as a series of papers to stimulate enthusiasm and strengthen problem solving skills in mathematics.

The Australian Primary Schools Mathematical Olympiads Incorporation has been providing Olympiad programmes since 1987. Approximately 27,400 students from schools in Australia, New Zealand and Singapore took part in 2004.

Two separate programmes are available; the Primary School Olympiads for students up to 12 years of age, and the High School Challenge for students up to 14 years of age. Students compete individually or as a member of a school team.

The Olympiad programme is more than a single maths exam. It consists of a series of five short papers delivered approximately one month apart. This focuses on individual student improvement by providing time for practice and development of problem solving skills.

Goals of the Olympiads

- To stimulate enthusiasm and enjoyment for mathematics
- To develop flexible problem solving skills and strategies
- To foster creativity and ingenuity and strengthen intuition
- To increase depth of comprehension
- To strengthen the foundation for future studies
- To provide for the satisfaction, joy, and thrill of meeting challenges.

The following individual awards are achievable: participation certificates, perfect scorer medals, top 10 percent and 25 percent awards, and the highest scorer within a team. Team awards are issued to the overall highest scoring team and teams scoring in the top 10 percent.

The Olympiad also provides Encouragement Awards following nominations. Here are actual comments from the 2004 nominations :

"The Olympiads competition has been an excellent extension for our nominee as it has enabled her to link her mathematical understandings to more difficult problem solving."

"Our nominee wrote for a self assessment: 'I believe I have improved since the start of the tests. I enjoy Maths Olympiads because I like a challenge and I like Maths'. This reflects a great improvement in his confidence level and he shows increased persistence and has a wider bank of strategies he now is able to use."

"Many thanks for your work this year on an excellent and worthwhile programme."

"Our school has participated in the High School Challenge of the Primary Schools Mathematics Olympiad since 2003 and will continue to do so. Our top Year 7 and 8 classes have enjoyed the problems and have looked forward with eager anticipation to each Olympiad.

"The variety of topics and the nature of the questions have extended their ability to think mathematically even when there are time constraints. The time spent on problem solving has led to interesting class discussions relevant to many areas of the curriculum. The skills of each student have been enhanced in ways which complement other challenge and enrichment programmes."

Schools interested in taking part in the 2005 Olympiads can contact APSMO Incorporation for late entries.

Further information and registration details can be found at the Olympiads website.

- Advertising feature

Contact: Australian Primary Schools Mathematical Olympiads Inc.
Tel: (00612) 9476-8922.
Website: www.apsmo.info