

# Computational and Algorithmic Thinking (CAT) competition

(formerly Australian Informatics Competition - AIC)

## Tuesday 21 March 2017

No previous experience in computer programming is necessary

The Computational and Algorithmic Thinking (CAT) competition is a one-hour problem-solving competition which seeks to identify computer programming potential—something which students might not normally have an opportunity to demonstrate.

The CAT is not a programming competition and no programming experience is required. Results in the CAT often enable a talent to be discovered that is not always apparent or sought in normal classroom activities. Some questions test the ability to accurately perform procedures; others require logical thought, while the more challenging problems require the identification and application of algorithms. The inclusion of digital technologies in the Australian Curriculum provides another reason why schools should consider this contest for their students.

There are three papers for secondary students: Junior, Years 7–8; Intermediate, Years 9–10; Senior, Years 11–12. Each paper includes six multiple-choice questions, followed by nine more challenging questions where an integer constitutes the solution to a problem.

The CAT problems are designed to be quick to solve and highly approachable, and range in difficulty from very easy to challenging. The competition employs a mixture of multiple-choice and integer answers, and incorporates unique 'three stage tasks' that encourage students to develop informal algorithms and apply them to test data of increasing size or complexity. The competition is an ideal activity to encourage an interest in programming

All students receive a certificate showing their level of achievement and a detailed report showing how they went on each problem compared with others in their own year and country/Australian state. In previous years, a student from Smith's Hill was ranked 5th in Australia for this competition and was selected for the training squad for the National CAT team.

Sample Questions can be found at <http://www.amt.edu.au/aicsample.html>. This year the school is going to trial the on-line version of this competition. If you are interested in participating in this competition you are requested to return the following slip to the front office by **7 March 2017. Cost: \$6.50**

-----Please detach and return with your payment to the school office-----

**Computational&Algorithmic Thinking (CAT) competition 21 March 2017. Cost: \$6.50**

Student Last name .....Student First name .....  
Cohort (Please circle) 7      8      9      10      11      12  
Amount paid \$..... (**Office use only: Competition Dissection: 065-012**)

I hereby give permission for my daughter/son to be absent from class for one hour while she/he participates in the Computational and Algorithmic Thinking Competition

Parent Last name .....Parent First name .....  
Parent signature .....Date .....