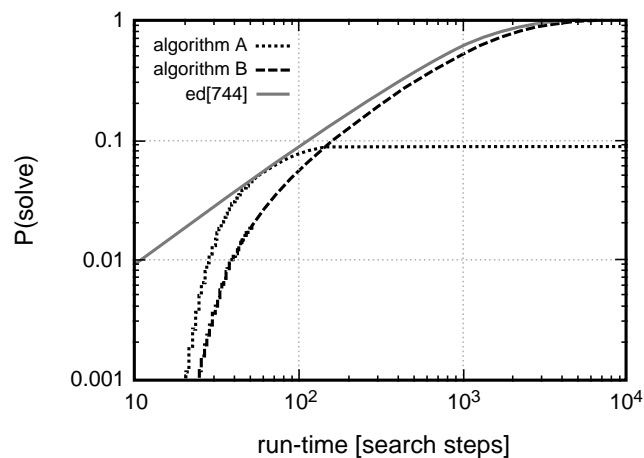


This assignment covers Module 5. It is due on Wed, 15 June 2005 at the beginning of class. If possible, please send me a PDF file (which may be obtained by scanning handwritten pages) via e-mail to hoos@cs.ubc.ca and give me a hardcopy marked with your name.

Feel free to discuss the problems and solution ideas with other students, but you need to work out and write down the actual solutions on your own.

**Problem 1 (5 marks)** Explain the difference between a run-time distribution (RTD), a solution quality distribution (SQD), and a search cost distribution (SCD).

**Problem 2 (10 marks)** You are comparing the performance of two SLS algorithms *A* and *B* for a combinatorial decision problem. Applied to a well-known benchmark instance, these algorithms were found to exhibit the RTDs shown below.



What do you learn from these RTDs? Which further experiments do you suggest to decide which algorithm is superior?