

**Pre employment Technical Screening - Engineering**

Candidate Name:

Date sent to Candidate:

Return to Adaptive Planning by:

**Instructions**

Please write all answers in Java. Algorithms should be entirely your own work, completed without help from anyone else or the use of reference materials other than standard Java documentation. Include examples of reasonable test input and the corresponding result that your program would return.

Answers should be submitted before 5pm on the return by date above. The test can be returned via email or fax.

**Problem 1**

Write a method which given two integers, returns the integer that is closest to 1000.

**Problem 2**

Write a method which given a string, returns a string where every character in the original is doubled. For example, given the string "xyz", return the string "xxyyzz".

**Problem 3**

Write a method which takes an array of integers. The method should return true if there is a way to split the array in two so that the sum of the numbers on one side of the split equals the sum of the numbers on the other side.

**Problem 4**

Write a method which given a string, returns a string with an asterisk inserted between every character in the original. Use recursion in your solution.