

CS5000: Assignment 6
Due: Oct. 10, 2008 by 11:59pm

Vladimir Kulyukin
Department of Computer Science
Utah State University

Problem 1: 1 point

The point of this problem is to give you some experience with writing simple programs in L. Write an L-program that computes the function $f(x) = 2x$.

Problem 2: 1 point

Consider the following L-program that computes $f(x_1, x_2) = x_1 + x_2$.

```
Y <- X1
Z <- X2
[ B ] IF Z != 0 GOTO A
      GOTO E
[ A ] Z <- Z + 1
      Y <- Y + 1
      GOTO B
```

Write the computation of this program for $f(1, 2)$.

Problem 3: 2 points

Prove or disprove: There exists an L-program P such that for every computation s_1, \dots, s_k , $k = 4$.