1. Problem 1 (20 Points)
Give an example of a left associative operator in RPAL and then modify the grammar such that it won't be left or right associative anymore.

2. Problem 2 (20 Points)
According to the semantic definition of RPAL, are RPAL programs meant to be evaluated in PL order or normal order? Why was this choice made?

3. Problem 3 (20 Points)
Can you give an example of an RPAL program whose root of a fully standardized tree is not lambda or gamma? Can you give an example of an RPAL program in which Ystar is not a leaf in its standardized tree? (If it exists in both cases)

4. Problem 4 (20 Points)
Can you write a macro in standard C that `returns' the greatest common divisor of a pair of arguments, without calling a subroutine? Why or why not? [textbook 3rd edition, problem 3.22]
5. Problem 5 (20 Points)

In Section 3.5.4 we noted that while a single min function in C would work for both integer and floating-point numbers, overloading would be more efficient, because it would avoid the cost of type conversions. Give an example in which overloading does not seem advantageous--one in which it makes more sense to have a single function with floating-point parameters, and perform coercion when integers are supplied. [textbook 3rd edition, problem 3.20]