

# Homework 4 Due: start of class on Tuesday, May 12th

Note: Use chapter 13 of PLP to help with questions 2-4.

1. Reduce the following lambda expression to normal form:  $(\lambda y . (\lambda z . x z (y z))) (\lambda a . (a b))$
2. What are the seven distinctive features of scripting languages? Write a sentence or two about each feature. For each feature, write a separate little code snippet in Python, Perl, or Ruby that illustrates the feature.
3. Guido van Rossum developed Python as “a language for everyone.” Given the example in Figure 13.7 and the examples seen in class, do you believe that Python is a language for everyone? If so, explain why. If not, explain what needs to be fixed in Python.
4. If the following pseudocode used Python-style scoping, what would the following code print out? Assume that the return value of `read` is “330 rox”.

```
secret = "none";
sub getSecret {
  sub getInput {
    s = read();
    return s;
  }
  secret = getInput();
}
getSecret();
print secret;
```