Your name:

Due: Wednesday, October 23

Instructions: Review the course honor policy for written homeworks.

This cover sheet must be the front page of what you hand in. Fill out the left column in the table to the right after we go over each problem in class, according to the rubric below.

This rubric is also on the website, in more detail, under “Other Stuff” → “Grading Rubrics”.

Make sure all problems are submitted IN ORDER.

- **5**: Solution is completely correct, concisely presented, and neatly written.
- **4**: The solution is mostly correct, but one or two minor details were missed, or the presentation could be better.
- **3**: The main idea is correct, but there are some significant mistakes. The presentation is somewhat sloppy or confused.
- **2**: A complete effort was made, but the result is mostly incorrect. There may be some basic misunderstandings of the topic or the problem.
- **1**: The beginning of an attempt was made, but the work is clearly incomplete.
- **0**: Not submitted.

Comments or suggestions for the instructor:

What other students did you work with?

Citations (be specific about websites):
1 Draw an AST

Here is a program written in Python. Draw its AST.

```python
x = 10
while x > 0:
    print(x)
    x = x - 3
print("done")
```
2 Undraw an AST

Write a program in the language of your choosing that would generate the following AST:

(Click on the diagram to zoom in.)

Figure 1: AST for HW 7

(Be sure to specify which language you have chosen!)
3 Lexical vs Dynamic Scope

Write a simple program using Java syntax that would behave differently under lexical or dynamic scoping rules. (I know that Java uses lexical scope, but you should be able to imagine the alternative as well.)

Specify what would happen under lexical and under dynamic scoping.

You can work together as always, but everyone should submit a unique example.