CSCE 330 Fall 2006

Quiz 7

Assigned Thursday, 06-10-05

1. Recall that, in denotational semantics, the *state* is a triple <mem, i, o>.
   (a) Which component(s) of the state are changed by a *read* instruction?
   Answer: i, mem
   (b) Which component(s) of the state are changed by a *write* instruction?
   Answer: o (only)
   (c) Which component(s) of the state are changed by an assignment?
   Answer: mem

2. What is the denotational semantics of the following program, where the initial input stream contains only the integer z?

```
read(n);
i := n+1;
write(i);
```

Hint: it is a very short answer!

Answer: <z+1>. Also acceptable: $z + 1$, although technically the answer is a sequence.