**IIT CS536: Science of Programming**

Homework Rework: Midterm Q3 rework

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**Original Q3.**

Consider the following program which we’ll call

Evaluate the program using small-step operational semantics, beginning in the state . If a step does nothing other than remove a from the beginning of a statement, you can skip it, but make sure to write a number over the arrow indicating how many steps are taken (. If you’re using a rule that relies on a premise , you do not need to show that the premise holds. You can wire for the body of the loop:

**Alternative for Q3**

Consider the following program which we’ll call

Evaluate the program using small-step operational semantics, beginning in the state . If a step does nothing other than remove a from the beginning of a statement, you can skip it, but make sure to write a number over the arrow indicating how many steps are taken (. If you’re using a rule that relies on a premise , you do not need to show that the premise holds. You can wire for the body of the loop:

**Solution:**