

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Department of Electrical Engineering and Computer Science  
6.01—Introduction to EECS I  
Spring Semester, 2008

**NanoQuiz Week #1 (sections 1 and 2)**

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**This quiz is due promptly 15 minutes after the start of the lab period.**

You may use the weekly assignment handout, but the quiz is otherwise closed book and closed computer. For programming problems, we won't penalize you for minor syntactic bugs: we're going only to read your answers, not run them.

1. Write a procedure `mean` that takes as its input a list of numbers (of any length) and returns the mean.

2. Today's design lab writeup describes how we will represent robot behaviors as a procedures that input sensor data and return actions. The writeup also describes how we represent an action as a list containing a name, along with translational and rotational velocities, for example, the following actions are already defined:

```
stop = ["stop", [0,0]]  
go = ["go", [speed,0]]  
# and so on
```

Suppose you are already given a procedure called `senseAhead`, where `senseAhead(sensorValues)` will return `True` if the robot senses something in front of it, and returns `False` otherwise. Using this, implement a behavior that will make the robot go forward until it senses something in front of it and then stops.

```
def moveForward(sensorValues):  
# complete the definition ...
```