

## Homework 1

100 Total Points

**Assigned on:** Friday, August 28th, 2020.

**Due:** Friday, September 4th, 2020.

**Submission:** As you wish: handwritten, typewritten, right before class, or on handin.

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### 1 Research 25 points

Every year the Loebner prize is awarded to the program that comes closest to passing a version of the Turing test. Research the Loebner prize and the Turing test. Report on the latest winner of the Loebner prize. What techniques does it use? How does it advance the state of the art in AI? etc.

### 2 AIMA, Exercise 1.7, Page 32 16 points

### 3 AIMA, Exercise 2.3, Page 61 27 points

### 4 AIMA, Exercise 2.4 (a, b, c) (Adapted) 10 points

1. For each of the agent types listed below, characterize its performance measure, environment, actuators and sensors according to the properties given in Section 2.3: 5 points

- Robot soccer player
- Internet book-shopping agent
- Autonomous Mars rover

2. Then characterize the environment according to the properties given in Section 2.3 (AIMA), and select a suitable agent design. 5 points

### 5 AIMA, Exercise 2.6 (a, b), Page 62 10 points

### 6 AIMA, Exercise 2.10, Page 63 12 points

Note: You do not need to design an agent in part B.