## Architectures of Intelligence

## Assignment 5

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## Part 1

Figure 1 shows the model running.

**Figure 2** shows the tuning (and response) curves of neuron ensemble "a".

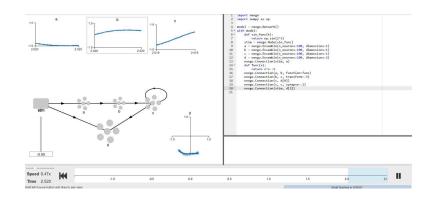


Figure 3 shows the model with a set stimulus of 0.

**Ensemble a** has a value of 0, as the signal is not modified between the stimulus and it.

**Ensemble b** has a value of -0.5. The signal is calculated as 0\*0-0.5=0.5 and remains constant over time\*.

**Ensemble c** has a constant value of -1.1. The signal from b of -0.5 is transformed by 0.5 to -0.25. Due to the ensemble 'remembering' the value (resulting in -0.1 due to the synapse being set to 0.1), it stacks over time only to stop at -1 -.1=-1.1.

\*Note that "constant over time" is an approximation, as there is a small amount of noise in the signal.

