# Problem to solve using conscious feedback

**Problem:**
Learn hower to solve $3 + ? = 8$

**Mechanisms:**

Already built-in

- If it tries a value & puts $3 + 4$ into WM, a processor gives it immediate answer: 7, and another

- Another processor gives immediate feedback: correct/wrong

- keeps trying until it gets a "correct".

- Aware of how numbers can be close or far apart ($(7 vs 8)$ vs. $(100 vs 8)$).
  ↳ But initially not able to actively use that for anything.

- Limit numbers to 1 to 100.
- Initially just try randomly picking numbers, without avoiding duplicates.

## Things could learn

- Result will be within bounds of $\pm (min(i) + max(i))$.
- Move (linearly) in direction of reducing difference.
- make bigger / smaller steps depending on size of difference.

## Approach:

1) Try random numbers within range 1..100.
2) Examine STM for final result and to discover predictions.

- use a bayesian theory model against final successful outcome. slow, but not too slow.

what $x$ leads to desired $y$ outcome?

Ideal mechanisms here would work against external senses too, to learn something about the world.... Possibly in the form of "how do I manipulate the world?"

Problem to Solve.

Ultimate goal: that it generalizes beyond limited 1..100 number range, and I can ask it: $> 1005 + ? = 2134$.