

Name \_\_\_\_\_

## What Happens if the AI Loop Breaks?

AI learns through a **feedback loop**, a cycle that repeats again and again:

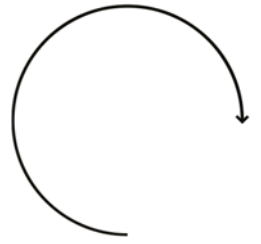
**Input** - The AI receives data or a task.

**Output** - The AI gives an answer or action.

**Feedback** - A human (or another system) says whether it was right or wrong.

**Retraining** - The AI updates itself so it can improve next time.

Every step is important. If one step is missing, the cycle is broken - and the AI will not learn properly. Think of it like a chain. If one link is gone, the whole chain fails.



**Guided Example Scenario:** A student asks a Homework Helper AI: "What is  $12 \times 8$ ?"

**Input:** The student types in the question.      **Output:** The AI answers: "82."

**Feedback:** (Missing Step)

**Retraining:** Without feedback, the AI keeps giving the same wrong answer.

**What's missing? → Feedback**

**What happens without it? →** The AI never learns it was wrong, so it keeps repeating the mistake.

**Directions:** Read each scenario. One step is missing. Write: Which step is missing (**Input, Output, Feedback, or Retraining**) What will happen if that step is skipped?

### Scenario A: Voice Assistant

1. (Missing Step)
2. The AI plays a random pop song.
3. The person says: "That's not what I asked for."
4. The AI updates and learns to better recognize the request.

**Missing Step:** \_\_\_\_\_ **What happens without it?** \_\_\_\_\_

### Scenario B: Weather AI

1. A person asks: "What's the forecast for tomorrow?"
2. The AI says: "It will be sunny."
3. (Missing Step)
4. Without correction, the AI continues making the same prediction errors.

**Missing Step:** \_\_\_\_\_ **What happens without it?** \_\_\_\_\_