Using TELL and ASK with a Knowledge Base

### 1. TELL Operation

When the agent receives **TELL(P)**, the sentence **P** is appended to the KB:

| Step | Knowledge Base Content |
| --- | --- |
| 0 | { P → Q , Q → ¬R } |
| 1 | { P , P → Q , Q → ¬R } |

### 2. ASK Operation

Query: **ASK(R)** – “Will I go outside?”

**Inference chain:**

1. **P** (from TELL)
2. **P → Q** (KB axiom)
3. **Q** (Modus Ponens on 1 & 2)
4. **Q → ¬R** (KB axiom)
5. **¬R** (Modus Ponens on 3 & 4)

Because **¬R** is now entailed, the answer to **ASK(R)** is **False**; the agent will not go outside.