**🔍 The Clever Solution**

1. **Label the jars from 1 to 100.**
2. **Assign prisoners to drink from specific jars based on binary representation.**

**How it works:**

* **Assign Prisoner 1 to drink from jars where the 1st bit is set (e.g., jars 1, 3, 5, 7, etc.).**
* **Assign Prisoner 2 to drink from jars where the 2nd bit is set.**
* **Assign Prisoner 3 to drink from jars where the 3rd bit is set, and so on.**

**🧪 Example:**

* **Jar 1: 001 (Prisoner 1 drinks)**
* **Jar 2: 010 (Prisoner 2 drinks)**
* **Jar 3: 011 (Prisoners 1 and 2 drink)**

**After 24 hours, the combination of prisoners who die reveals the binary number corresponding to the poisoned jar.**

**Minimal Number of Prisoners?**

* **You only need 7 prisoners because 2^7 = 128 > 100.**

**Variation:**

**💡 The Clever Solution**

1. **Label the jars from 1 to 100**.
2. From **Jar 1**, take **1 pill**; from **Jar 2**, take **2 pills**; from **Jar 3**, take **3 pills**, and so on.

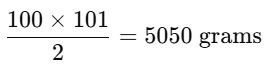
This means:

* From **Jar n**, take **n pills**.

1. **Place all the selected pills together on the scale**.

**🔍 How the Weight Reveals the Answer**

* If all the pills were safe, the total weight would be:



But since **one jar** contains heavier pills (1.1 grams instead of 1 gram), the total will be **heavier than 5050 grams**.

* If the weight is **5050.2 grams**, it means **Jar 2** is poisoned.
* If the weight is **5051.1 grams**, it means **Jar 11** is poisoned.

**The decimal part of the extra weight corresponds to the jar number.** 🎯

**🧠 Why It Works**

By assigning a **unique number of pills** from each jar, the extra weight will **uniquely identify the poisoned jar**.

**Simple, elegant, and efficient — all in a single measurement!** ⚖️😊