**LLM Logic Test Prompts**

## **Game Mechanics (Explicit Rule Application)**

**Uno (Rule Application - Clear & Enforceable)**

Prompt: "In UNO, a player can only play a card that matches either the color or number of the previous card.

The top card is a blue 5.

Player A plays a red 5.

Player B plays a red 8.

Player C plays a green 7.

Was Player C’s move legal?"

Expected Answer: “No, Player C’s move was not legal because green 7 matches neither the color nor the number.”

**Durak (Cheating That Becomes Legal)**

Prompt: "In a fast round of Durak, attackers are allowed to play cards that match in rank with any card already in play.

Player A plays a 7 of spades, which is **not a match** for anything on the table.

Before anyone notices, Player B plays a 7 of diamonds on top of it.

Does this make the 7 of spades legal?"

Expected Answer: “Yes, the 7 of spades becomes legal because it was followed by another matching rank. This is a known form of rule-slipping in Durak.”

**I’m Going Camping (Inference Logic)**

Prompt: "In the game “I’m Going Camping,” players must guess an item to bring along camping, and if it matches the theme they are allowed to go camping.

Shawn brings a stop sign, he can go camping.

Alexis brings a blanket, she can go camping.

Carla brings a wall, she can go camping.

Jack brings a pencil, he cannot go camping.

Erin brings a balloon, she cannot go camping.

Myles brings a TV, he can go camping.

Can Gina bring a mirror?"

Expected Answer: “Yes, because the pattern is anything that is flat, and a mirror is a flat object.”

## **Social Fairness & Turn-Taking**

**Cookie Party (Unequal Distribution with Justification)**

Prompt: "At lunch the class is having a cookie party they earned.

Lena is given two cookies. The others get one each.

The teacher says it’s because Lena has a dietary condition and can’t have Sarah’s birthday cake being served later.

Is this fair?"

Expected Answer: “Yes, it is fair because Lena’s extra cookie is to make up for missing out on birthday cake.”

**Turn Order (Turn-Taking Violation)**

Prompt: "Four friends are playing a board game.

The order of play is: Ellie > Ben > Jules > Ali.

Ellie takes a turn, then Ben skips Jules and lets Ali go next.

Jules says this isn’t fair.

What should happen?"

Expected Answer: “Ali’s turn should be reverted or Jules should go now. The order should be restored.”

**Basketball (Limited Resource Decision - Moral Reasoning and Value Weighting)**

Prompt: "There’s one spot left on a basketball team.

Three students want it:

Chris already played earlier, but is the best shooter.  
Devon hasn’t played at all, but struggles to intercept the ball.  
Maison already played earlier, but is the team captain’s friend.  
Who should get the spot?"

Expected Answer: “Devon should get the spot because they haven’t had a turn yet.”

Note: The AI might decide Chris is the best pick. If so, note this as not a fail but an alternative method of deciding.

~~The class is playing Basketball and the coach wants to be fair to everyone who wants to play.~~

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## **Procedural Tasks & Cause-Effect**

**Curling Safety Procedure (Cause-Effect)**

Prompt: "In curling, players push a heavy stone across ice by stepping into a starting block called the hack.

To be safe, a player must first place one foot in the hack and then step onto the sliding foot.

If they step on the teflon slider before entering the hack, what might happen?"

Expected Answer: “They might lose their balance and fall, since the slider is slippery and unstable without support.”

**Performance Timing (Critical Step Missed)**

Prompt: "A student is performing in a school musical.

During the performance, they forget to sing the second verse of their song.

What impact could this have on the rest of the scene?"

Expected Answer: “It could throw off the timing and cue for other performers or musicians, disrupting the scene.”

**Server Moderation (Dispute Resolution)**

Prompt:"Two players on a Minecraft server are arguing.

Step 1: The moderator gathers basic facts.

Step 2: The moderator listens to both sides of the story.

Step 3: The moderator compares the behavior to server rules.

Step 4: The moderator makes a decision based on intent, history, and impact.

If the moderator skips Step 2, what might go wrong?"

Expected Answer: “They may make an unfair decision without hearing both sides, leading to bias or player resentment.”

## **Fictional World Rules (Constructed Logic)**

**Magic Bananas**

Prompt: "In the Jungle of Luthrain, there are always exactly 100 golden magic bananas in existence.

If one is eaten or destroyed, a new one immediately grows on a tree somewhere in the jungle.  
These bananas are incredibly rare and powerful.  
If three bananas are eaten in quick succession, how many bananas exist five minutes later?"

Expected Answer: “100, because for each banana eaten, a new one immediately appears to replace it.”

**Spell Construction via Language (Conceptual Combinations)**

Prompt: "In the world of Fabul, magic spells are created by combining two or more words in the magical language of Arcant.

'Fire' + 'Arrow' = a flaming projectile spell.

'Water' + 'Wall' = a protective barrier made of water.

'Stone' + 'Bridge' = conjures a stone path over gaps.

If a mage says the word 'Foot + Freeze,' what kind of spell might this create?"

Expected Answer: “A spell that makes someone immobile or prevents them from walking, either by stopping their feet or encasing them in ice.”  
Note: Subjective Answer, could be numerous things.

**Ouroborian Mark (Time & Inference-Based Logic)**

Prompt: “Legends tell of an ancient people called the Ouroborians who had the power to mark others with a magical symbol shaped like a serpent eating its tail.

The mark grants enhanced magical abilities.

It gradually shrinks until it disappears.

When the mark vanishes, the bond is broken, but the cost of failure is never spoken aloud.

Two students at the academy are marked:

Rell immediately begins their task and shows great magical improvement.

Nyla does nothing, relying on the powers granted by the mark and hoping to start later.

After one week, Rell is celebrated. Nyla is nowhere to be found.

What might have happened?"

Expected Answer: “Nyla likely failed to complete the task in time, and the consequences were fatal or otherwise severe. The disappearance implies a high cost for inaction.”

## **Pattern & Deduction Puzzles**

**Card Cypher (Pattern Logic)**

Prompt: "In a secret code used by spies in the kingdom of Wystria:

Red suits represent the first half of the alphabet (A–M)

Black suits represent the second half (N–Z)

Ace = A or N, 2 = B or O, 3 = C or P … King = M or Z

What letter does the '7 of Clubs' represent?"

Expected Answer: “T” (Clubs = Black > second half of alphabet, 7 = 7th letter in that half > T)

**Rainbow Order + Color Logic Puzzle**

Prompt: "A painter is sorting paints based on the order of the rainbow:

First Red, then Orange, all the way to Purple.

They currently have the following set of paints on their shelf:

Green, Red, Purple, Yellow

Which paint is **second** in correct rainbow order?"

Expected Answer: “Yellow, because there is Red but no Orange preceding it.”

**Behavioral Pattern Reflection (Symbolic and Social Behavior)**

Prompt: "A teacher observes that many of her past students find careers relating the behaviors they showed as children:

Children who organized and protected their toys became bankers and landlords.

Children who asked many questions became scientists and journalists.

Children who followed the rules and reminded others of them became lawyers and public servants.

Given this pattern, what kind of profession might suit someone who, as a child, constantly made up stories?"

Expected Answer: “A writer, screenwriter, game designer, marketer, or lawyer. Professions where storytelling or persuasion are central.”