Tool-Assisted Speedruns

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Why I’m Giving This Talk

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Tool-Assisted Speedruns

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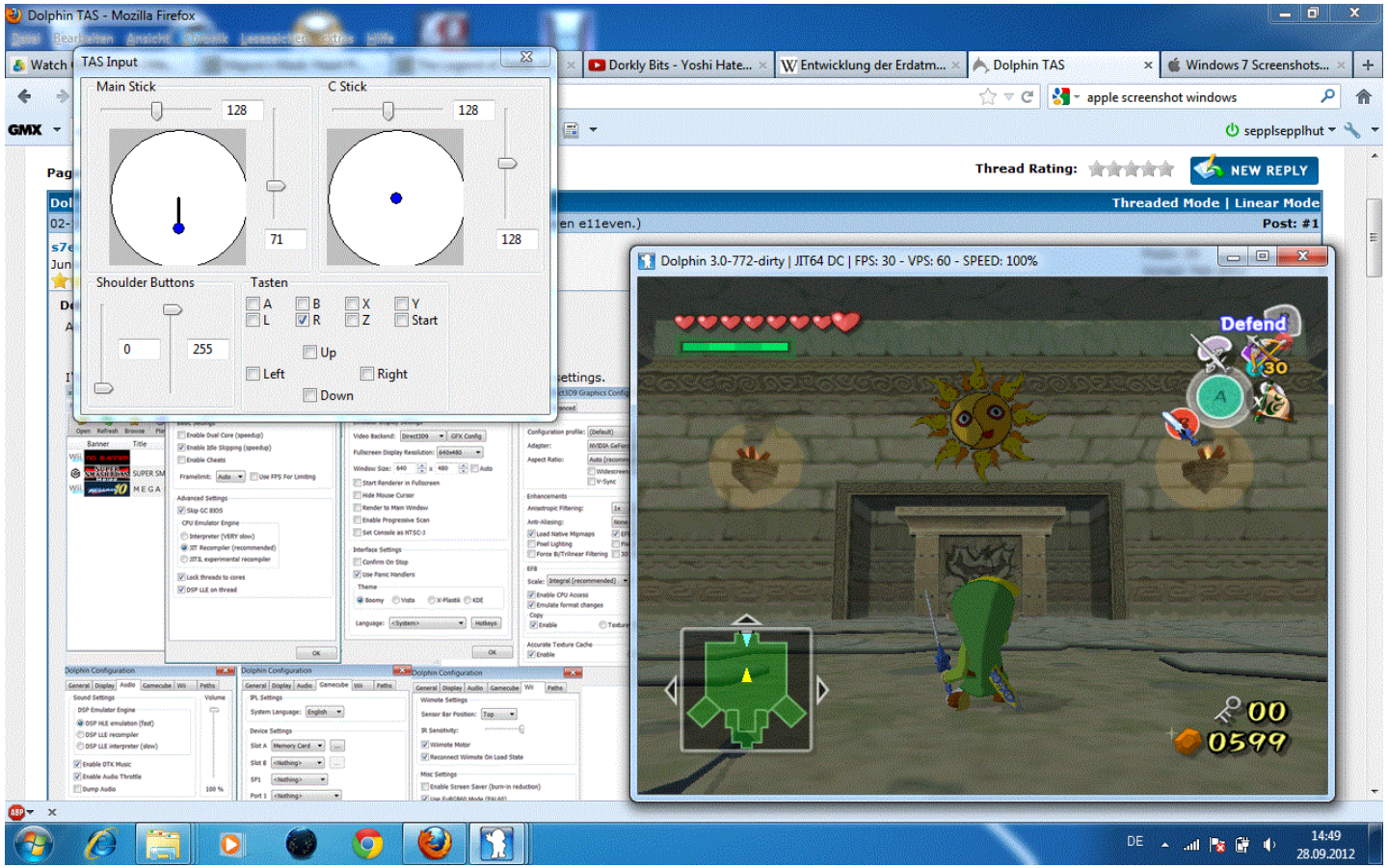
Allowed:

- Emulators
- Slowdown (frame by frame)
- Savestates/re-records
- Input/RAM viewers
- Disassembling game code

Not allowed:

- Modifying the game



Tool-Assisted Speedruns

Goal: beat the game as fast as possible

- Power-on to final input

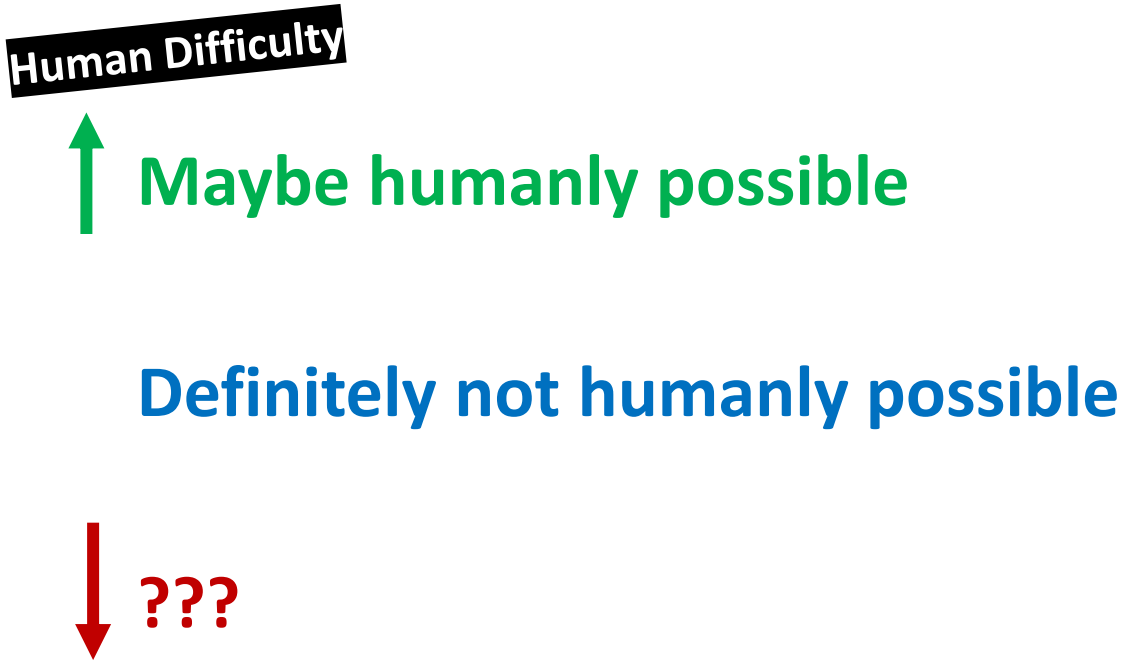
Real goal: **be entertaining**

- Tool-assisted **superplays**
- Bend the definition of “as fast as possible”

The Extent of TASVideos

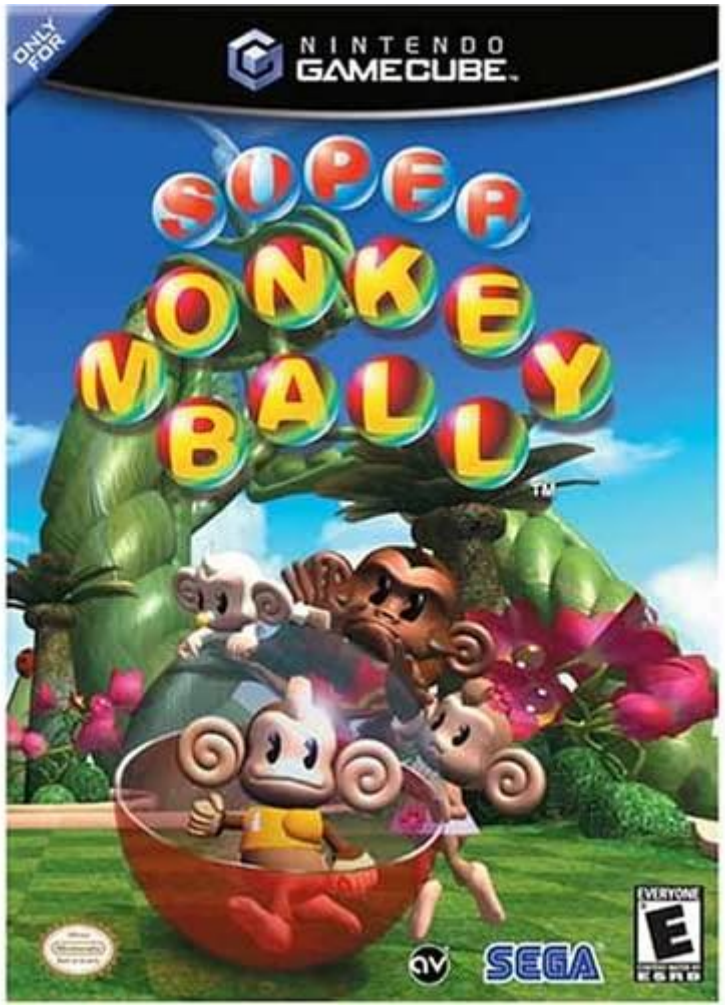
A huge range of speedruns:

- Extreme skill and luck
- Breaking the game
- Speedruns as art



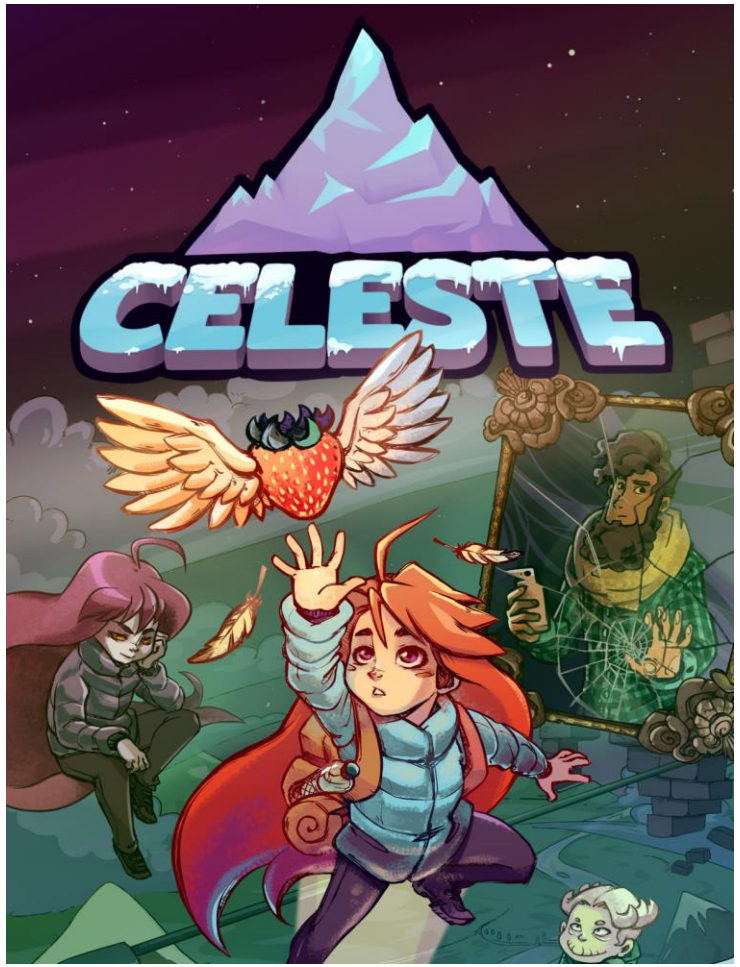
Part 1: Extreme Skill/Luck

Extreme Skill: Super Monkey Ball



Extreme Skill: Super Monkey Ball

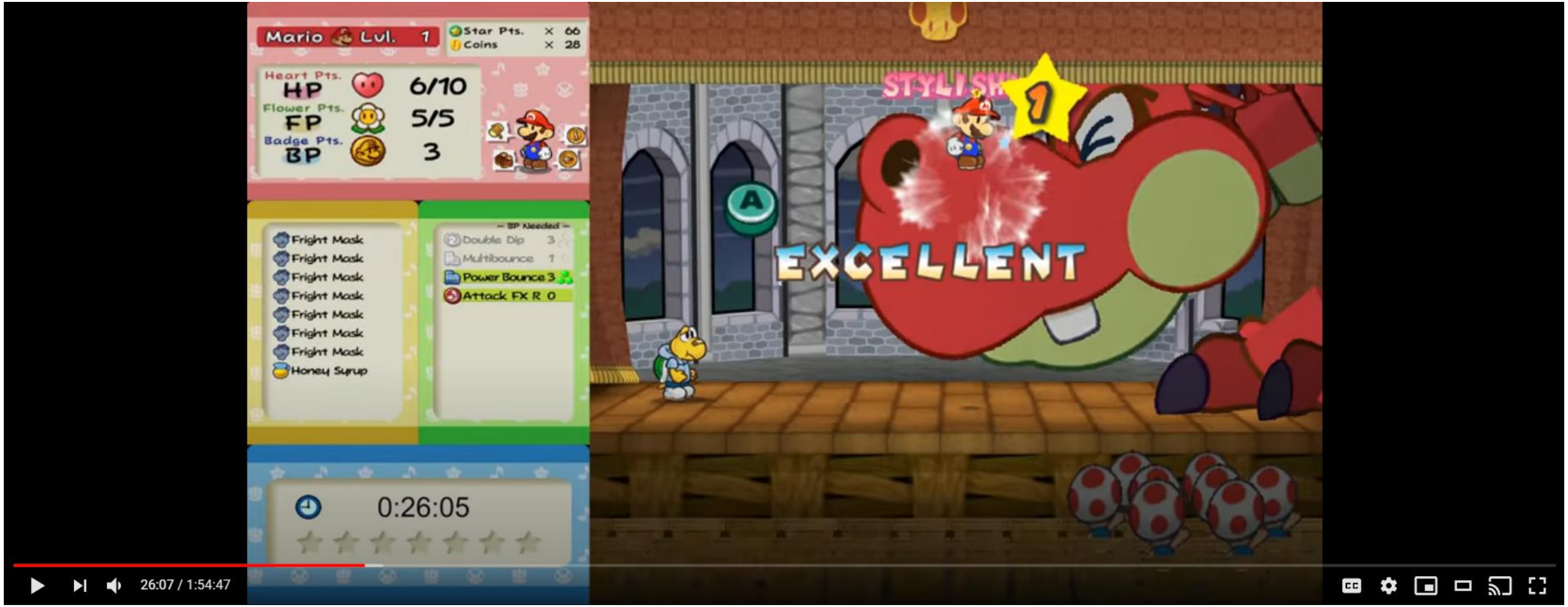
Extreme Skill



Extreme Luck: Clue

Extreme Luck: Clue

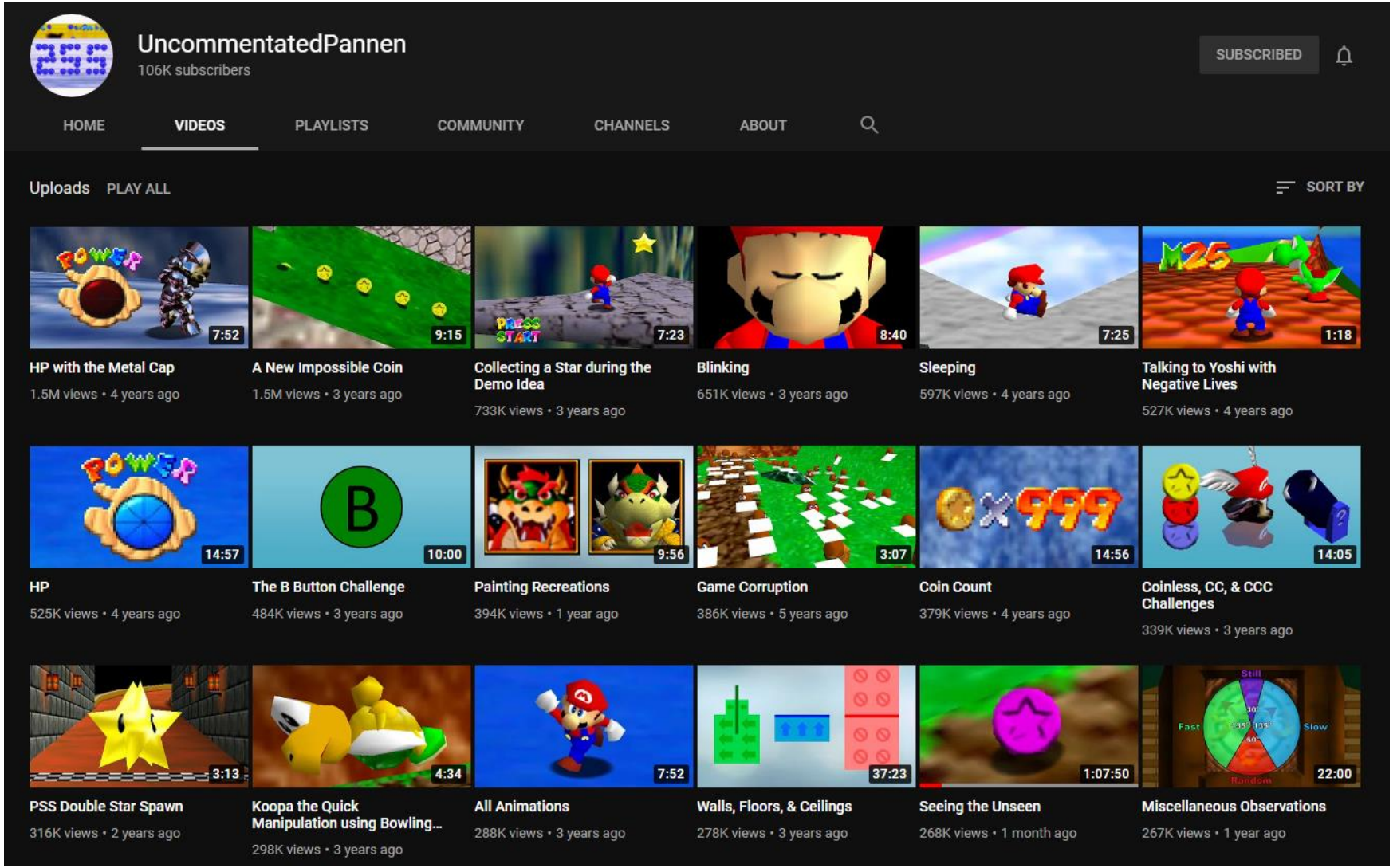
Extreme Luck: RPGs



Part 2: Breaking the Game

Breaking SM64: The A Button Challenge

What Would You Do For An A Press?



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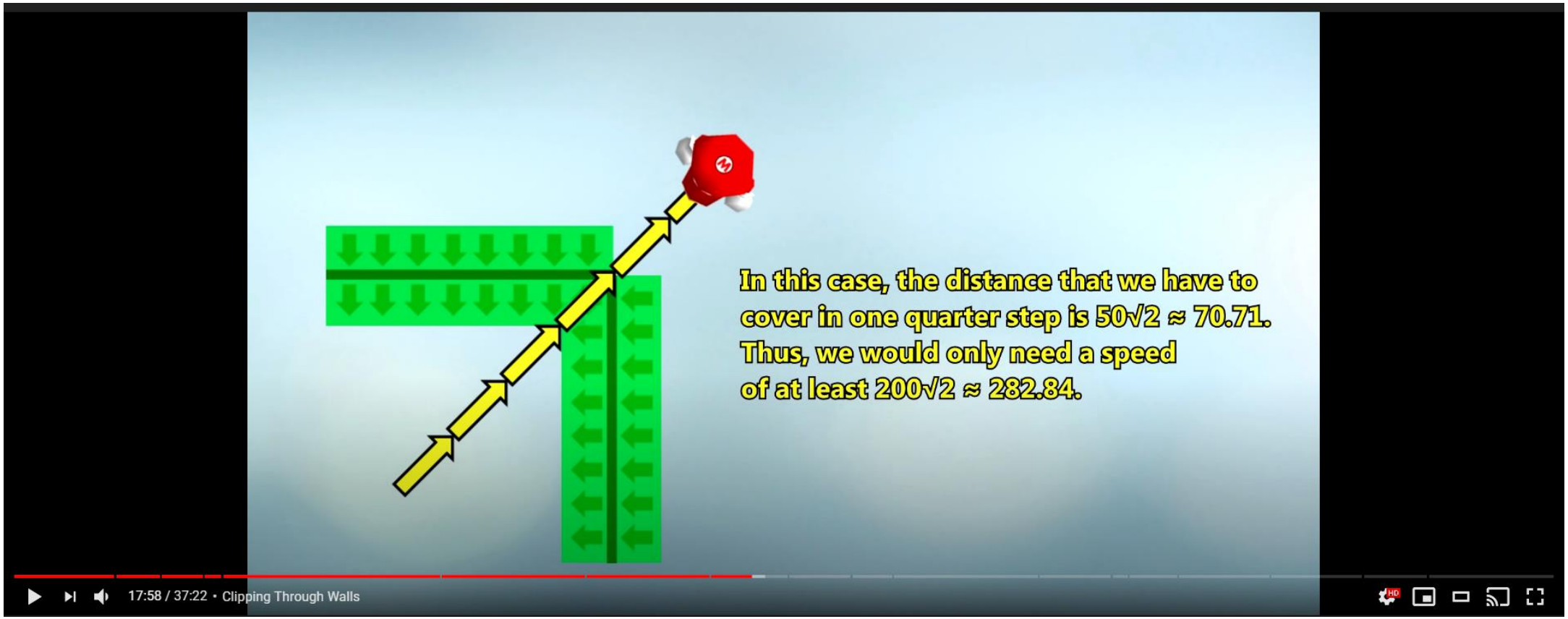

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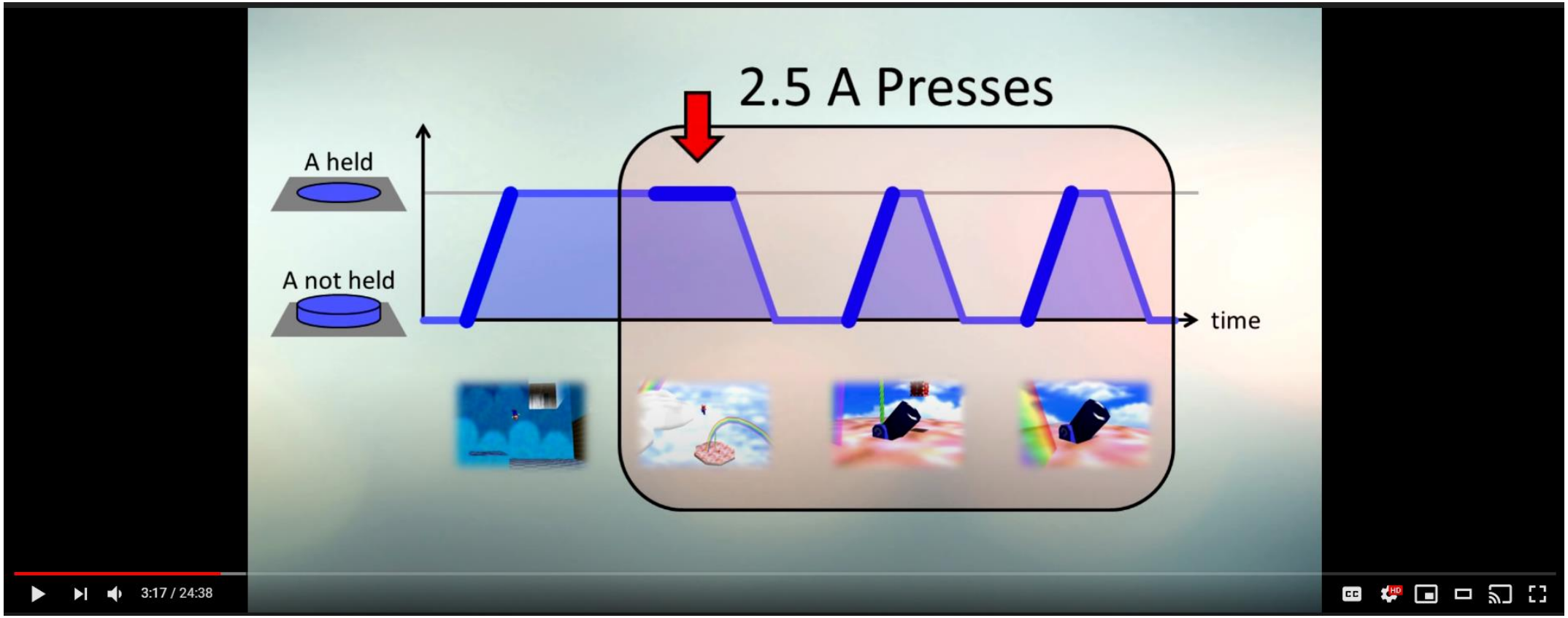
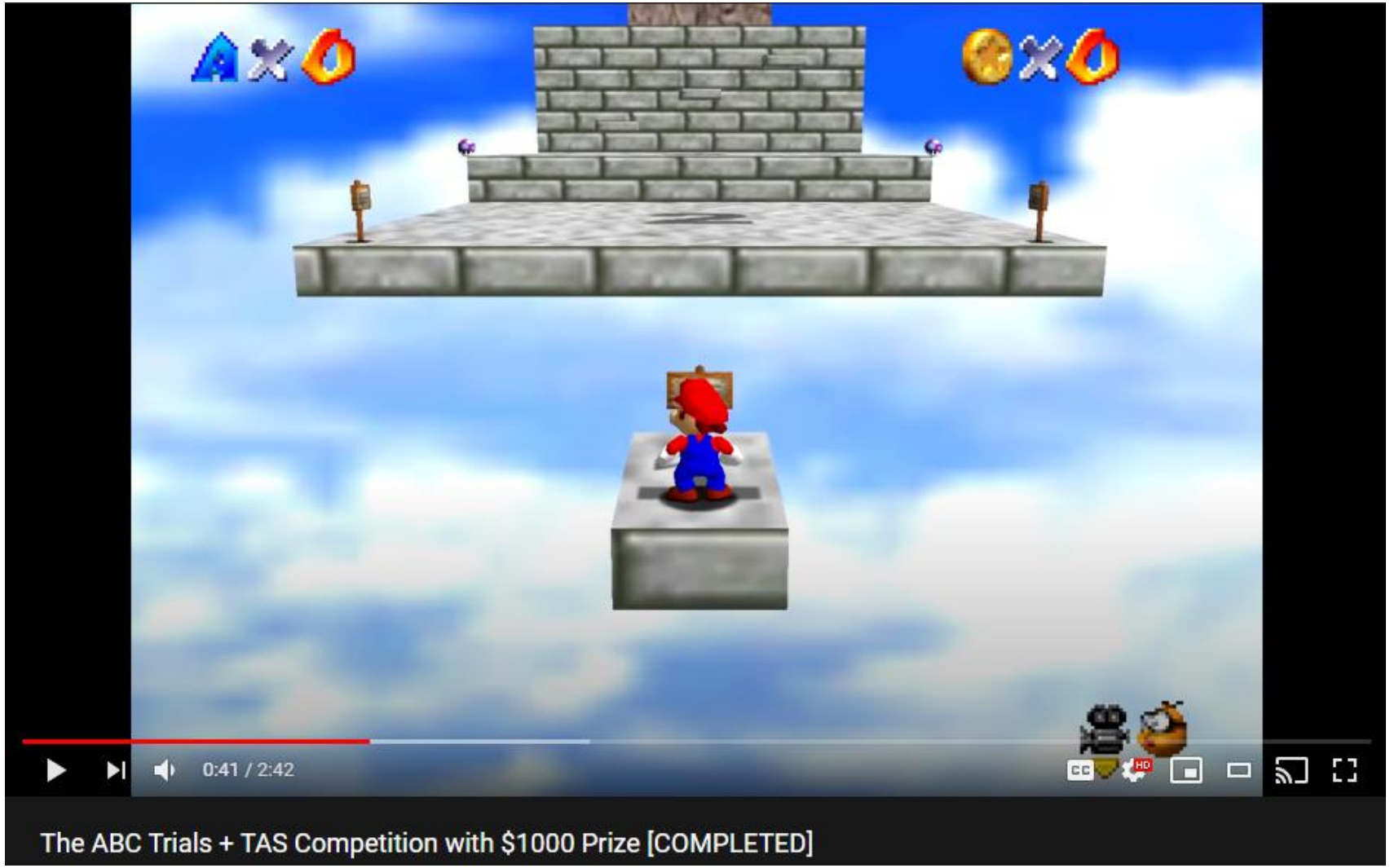


Friendly Competition



Breaking Kirby Super Star: ???

What?

The reason why the game freaks out when you try to climb a ladder up and down at the same time is because it doesn't expect you to do that.

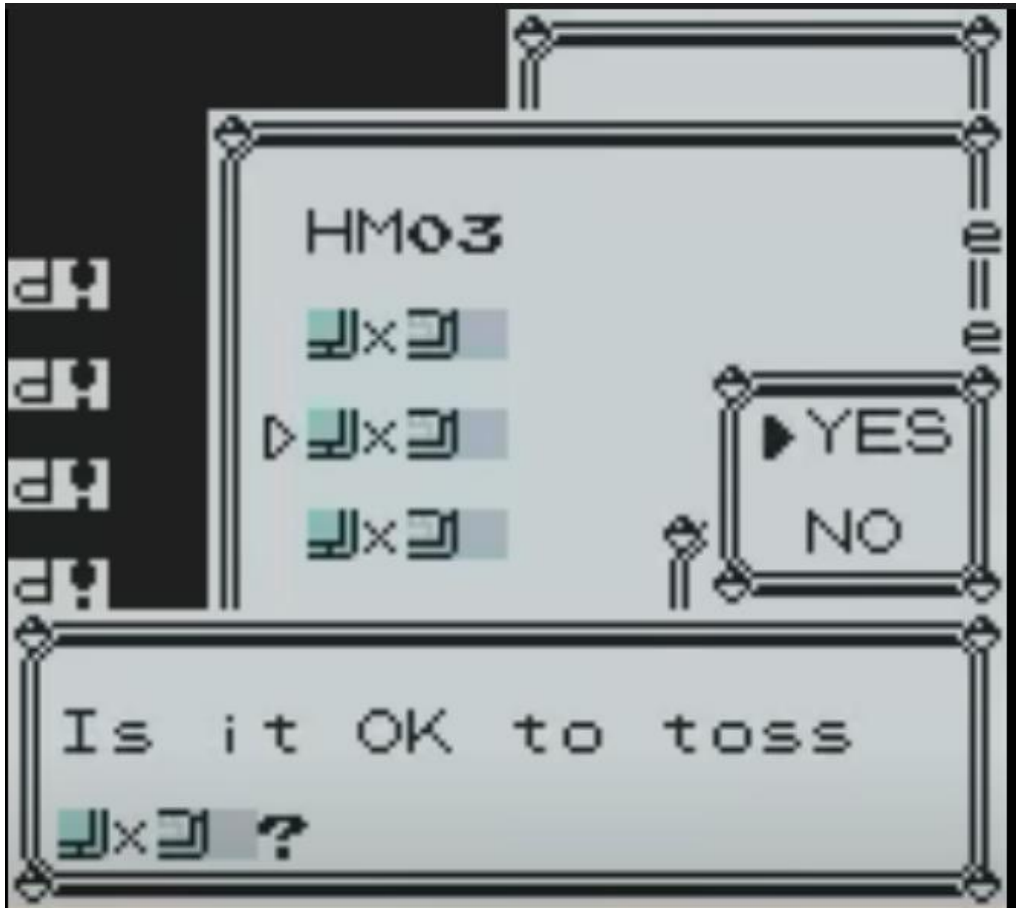
The initial glitch happens in the SA1 processor which indexes a location wrong and jumps to garbage code […] It manages to lead the CPU to the controller registers […] where then the fun begins. When I say the fun begins I don't actually mean fun, because I now have to deal with two processors and a destroyed RAM.

I managed to kinda see the addresses I have to change for example changing the gamemode ($7390) to cutscene (0x0008) or the game chosen ($32EA) to Milky Way Wishes (0x0005).

[...] I reset the SA1 processor and set it to a new location in SA1-IRAM, where I wrote a new code for it to execute, because not only RAM was damaged, the stack and direct page register were corrupted too. I changed all values and the last cutscene started.

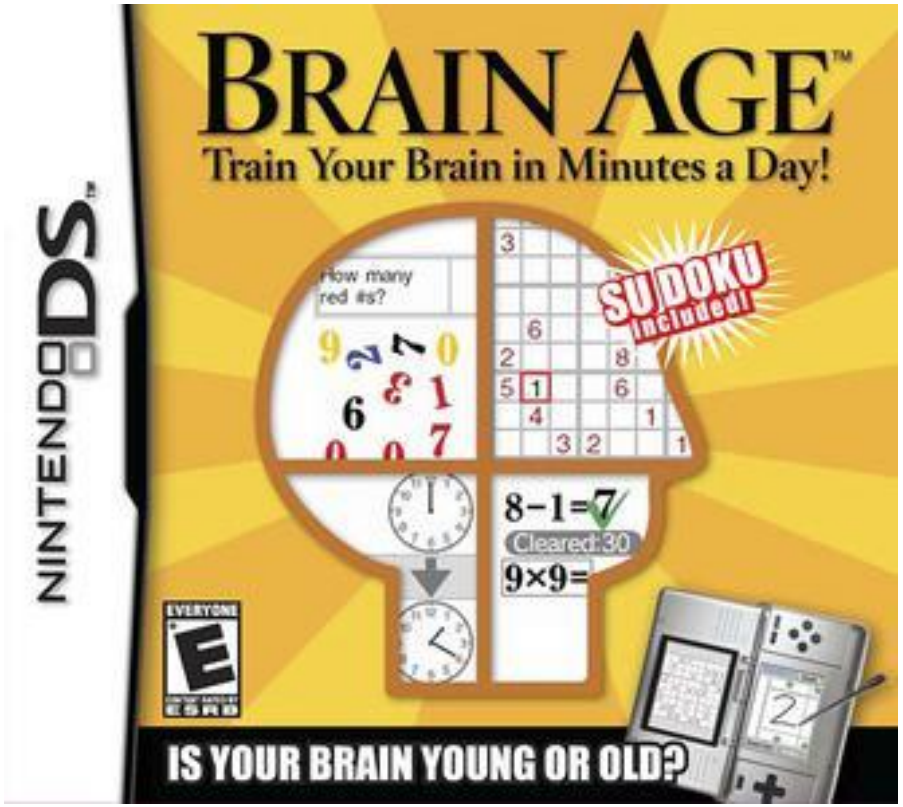
“Arbitrary Code Execution”

More Really Broken Games

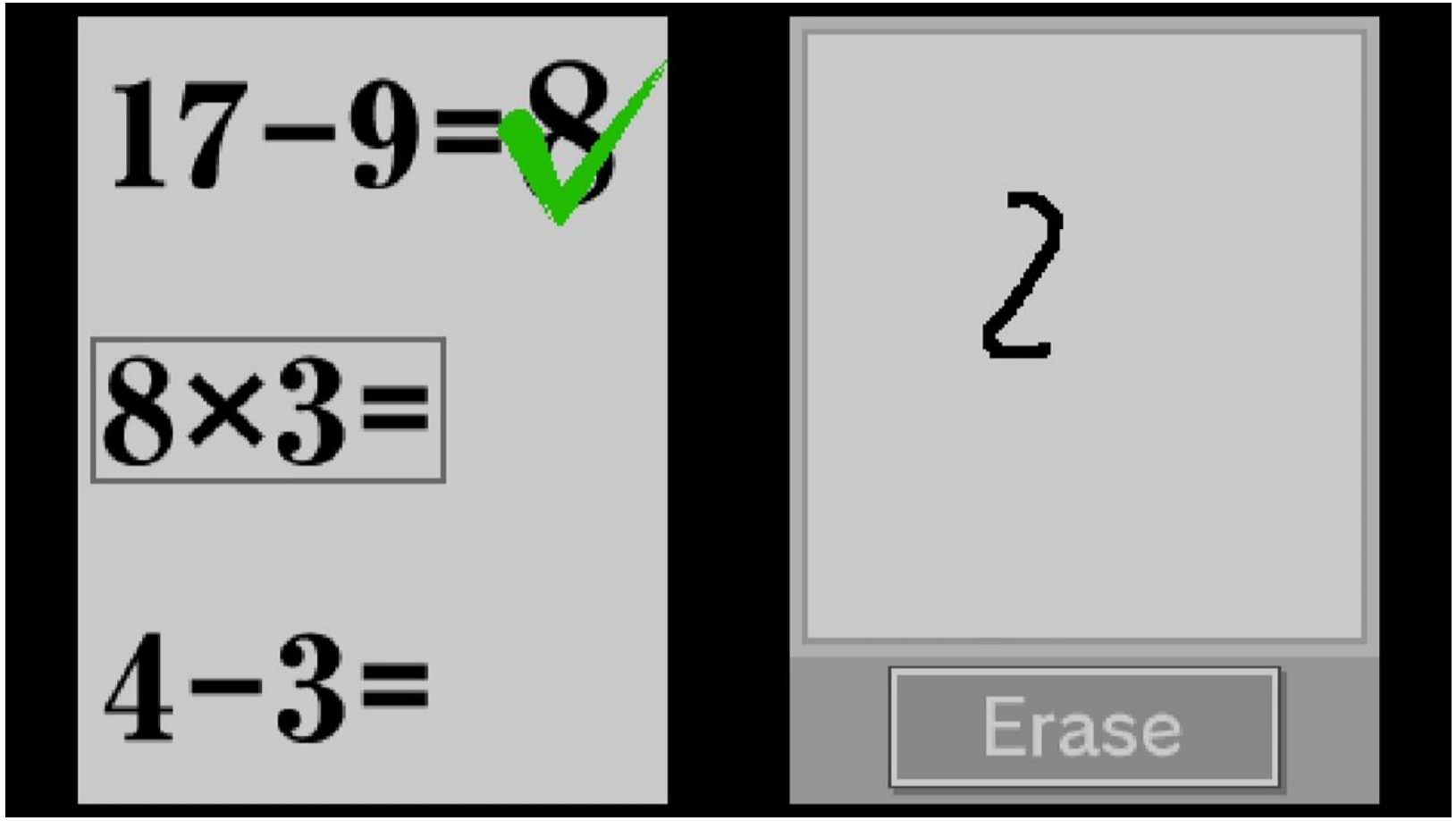


Part 3: Speedruns as Art

Brain Age


BRAIN AGE™
Train Your Brain in Minutes a Day!
How many red #s?
SUDOKU included!
8−1=7
Cleared:30
9×9=
NINTENDO DS
EVERYONE
E
ESRB
IS YOUR BRAIN YOUNG OR OLD?

Brain Age



TASing is Art

TASes bring people together to solve problems in **creative**, **entertaining** ways

This takes:

- Gamers, to find creative, out-of-the-box strategies
- TASers, to plan and execute speedruns
- Programmers, to build the tools that make it all work

This could be **you**!