No Longer Number Theory Constructions

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DNY-NOT-NTCONSTRUCT

§1 Lecture Notes

§1.1 Heuristics

IDK

§1.2 Examples

Example 1.1 (Example)
My First Example

Example 1.2 (Walkthrough)
Hardest Celeste Level

Walkthrough. Google "Farewell"

§2 Practice Problems

Instructions: Solve [36♣]. If you have time, solve [48♣]. Problems with red weights are mandatory. Try to solve at least one of the two [9♣] problems.

> I'm concerned that we're sitting here like I'm a responsible adult. I'm pretty sure I stopped growing up in my teens and have been faking ever since.
>
> xkcd 616, *Lease*

[9♣] **Required Problem 1** (Play Celeste)**.** Happy Pride Month!

SNAKE0

[9♣] **Problem 2** (Snake Simulator)**.** For $n \geq 0$, compute

$$\sum_{k \geq 0} \binom{n+k}{2k} 2^{n-k}$$

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[2♣] **Problem 3** (BAMO 2018/4)**.** Let a, b, c be positive integers. Show that if $a/b + b/c + c/a$ is an integer, then $\sqrt[3]{abc}$ is an integer as well.

[1♣] **Mini Survey.** Fill out feedback on the OTIS-WEB portal when submitting this problem set. Any thoughts on problems (e.g. especially nice, instructive, easy, etc.) or overall comments on the unit are welcome.

In addition, if you have any suggestions for problems to add, or want to write hints for one problem you really liked, please do so in the ARCH system!

The maximum number of [♣] for this unit is [12♣], including the mini-survey.