



Stacking Numbers 1-10 - Counting Puzzle Tray



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Summary

Tactile counting puzzle: every number N is exactly N units tall. Pieces 1-10 fill the 6×11 tray perfectly.

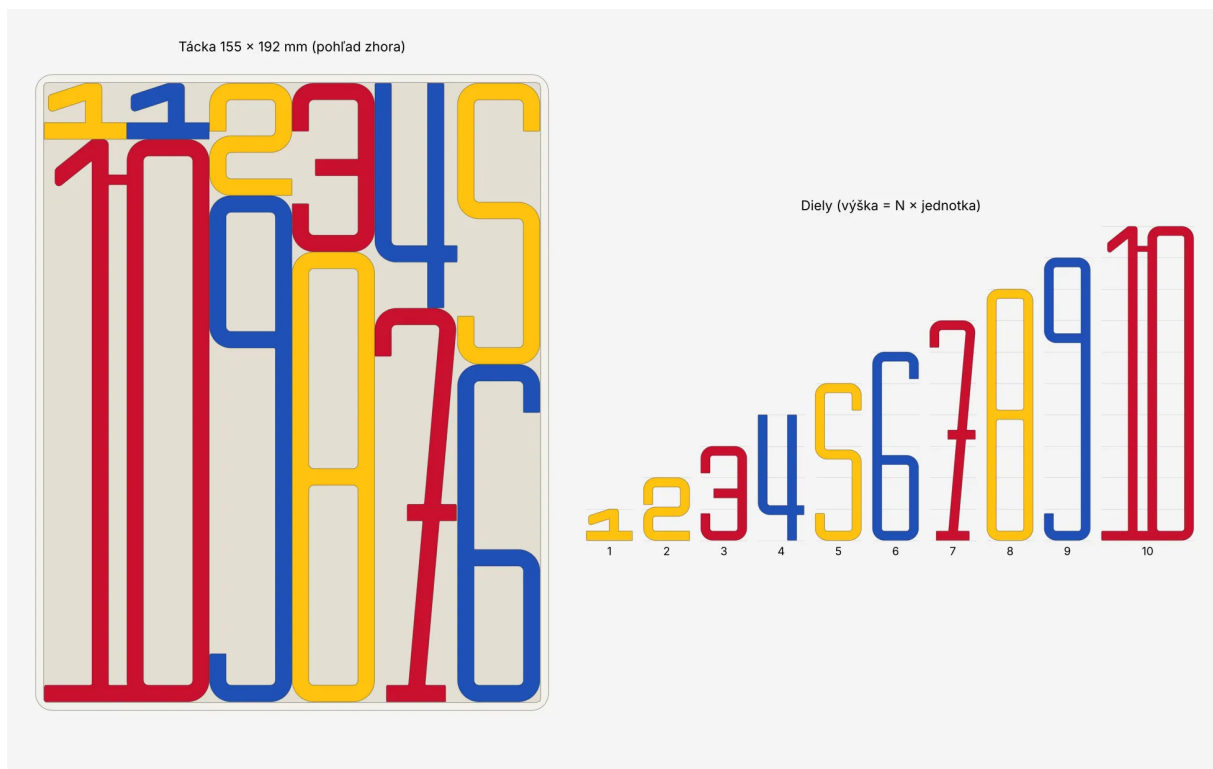
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[numbers](#) [counting](#) [montessori](#) [toddler](#)

A tactile counting puzzle: every number N is exactly N units tall, so kids can see – and feel – that 10 is ten times as tall as 1. All pieces fit snugly into the tray: $1 + 1 + 2 + \dots + 9$ and the double-width 10 fill the 6×11 grid completely.

How it works

- Every digit has the same width; its height is $N \times$ one unit (17 mm).
- Digits are built from a constant-width stroke – taller numbers only get longer straight sections, curves and hooks stay the same, so even the 9 and 10 stay crisp and readable.
- The pairs $2 + 9$, $3 + 8$, $4 + 7$, $5 + 6$ and $1 + 1 + 10$ each fill one column – a nice "make 11" game on its own.



Print settings (tested on Bambu Lab A1, PLA)

- 0.2 mm layer height, 3 walls, 15–20 % infill, no supports
- Pieces print flat (6 mm thick), tray 155 × 192 × 9 mm
- Keep elephant-foot compensation on (0.15 mm)

Colors

3 piece colors + tray = 4 filaments. No multi-material unit? Every piece is single-color, so just print one plate per color.

- **Red:** 3, 7, 10
- **Yellow:** 1, 2, 5, 8
- **Blue:** 1, 4, 6, 9
- **Tray:** white

No two neighbouring pieces in the tray share a color.

Fit

Pieces have a 0.1 mm gap between each other and 0.15 mm to the tray wall, so the full set sits snugly without rattling. Tip: to empty a full tray, simply turn it upside down.

About

Designed from scratch as a parametric model (Python / build123d). Inspired by a stacking-numbers toy I saw online.

Model files



STLs

11 files



cislo_10.stl



cislo_01.stl



cislo_03.stl



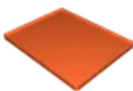
cislo_05.stl



cislo_07.stl



cislo_06.stl



tacka.stl



cislo_09.stl



cislo_04.stl



cislo_02.stl



cislo_08.stl



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