



## Cube Equation Puzzle by T. O'Beirne



Welt der Geduldspiele

VIEW IN BROWSER

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## Summary

Two tasks: Use all pieces to built three cubes:  $3 \times 3 \times 3$ ,  $4 \times 4 \times 4$ , and  $5 \times 5 \times 5$ .  
And: Use all pieces to built a  $6 \times 6 \times 6$  cube.

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Tags: [puzzle](#) [3dpuzzle](#) [packingpuzzle](#) [polycube](#)

Puzzle description:

The so-called cube equation is  $3^3 + 4^3 + 5^3 = 6^3$ . The puzzle pieces consist of nine cuboids with a volume of 216 cubies. There are two tasks:

1. Use all pieces to built three cubes:  $3 \times 3 \times 3$ ,  $4 \times 4 \times 4$ , and  $5 \times 5 \times 5$ .
2. Use all pieces to built a  $6 \times 6 \times 6$  cube.

This puzzle was designed by Thomas O'Beirne in the 1970s. There are other puzzles using the cube equation like <https://www.thingiverse.com/thing:3012609>, but their pieces are more complex than cuboids.

If you can read German: Mehr Informationen gibt es in <https://welt-der-geduldspiele.blogspot.com/search?q=3D-Druck>

Puzzle difficulty:

Easy. Especially the first task can be solved by beginners. The 6x6x6 cube is a little bit more difficult.

Printing instructions:

The model STL file was generated using PuzzleCAD: <https://www.thingiverse.com/thing:3198014>

If you print the cuboids in different colors the puzzle looks much more interesting. But photos of the solved tasks will show all details, so I uses only one color.

Prints are fine with no supports.

I printed the puzzle in PLA at 0.1 mm layer height.

## Print Settings

### Printer Brand:

Prusa

### Printer:

Mini+

Category: Puzzles

## Model files



**cubeequationobeirne.stl**

[Find source .stl files on Thingiverse.com](#)

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