



Perfect Rectangle Puzzle 5620x7526

W

Welt der Geduldspiele

VIEW IN BROWSER

updated 7. 5. 2024 | published 7. 5. 2024

Summary

Pack the 23 squares into the rectangular tray.

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Tags: **packingpuzzle**

A rectangle is called simple perfect if it can be filled completely with squares of different integer side lengths. This nice mathematical feature can obviously be turned into a puzzle.

The smallest simple perfect rectangles consist of nine pieces, one can be found here: <https://www.thingiverse.com/thing:2367965>. To make things more complicated, the perfect rectangle presented here consists of 23 pieces. Moreover, this perfect rectangle has the best ratio of the side lengths of the smallest compared to the largest piece, so all pieces are easy to handle. As a consequence, some squares have very similar size (601 and 610, for instance, i.e. the difference is $9 \cdot 0.02\text{mm} = .18\text{mm}$). In these cases you might use the side length printed onto the pieces to check correct fit.

The puzzle comes with a tray and the square pieces. They have their side length printed of one side. If the puzzle is solved you can turn over all pieces to get an optically pleasing flat surface.

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

Printing instructions:

The pieces are printed in three colors for optical reasons only.

The printing size of the puzzle is .02mm per unit.

I printed the puzzle in PLA at .1mm layer height.

Puzzle difficulty: The fact that the rectangle has to be filled without holes makes the puzzle not too difficult. Simple calculations with the side lengths can help to find fitting pieces. You cannot be sure that adjacent pieces will have different colors.

Nevertheless, the higher number of pieces increases the difficulty compared to the perfect rectangle with ten pieces at <https://www.thingiverse.com/thing:4883224>.

For general information about perfect rectangles and squares, see <http://www.squaring.net/>.

Print Settings

Printer Brand:

Prusa

Printer:

Mini

Rafts:

No

Supports:

No

Resolution:

200

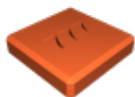
Infill:

38

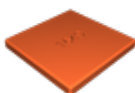
Filament: Prusament PLA

Category: Puzzles

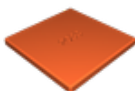
Model files



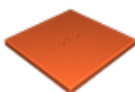
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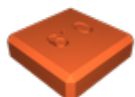
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square_2033_2.stl



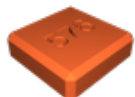
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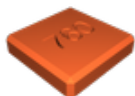
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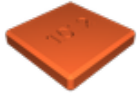
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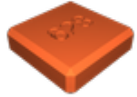
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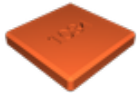
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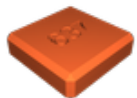
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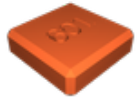
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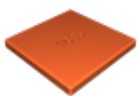
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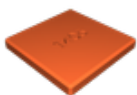
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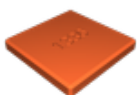
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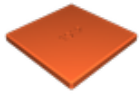
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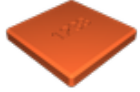
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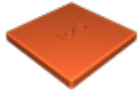
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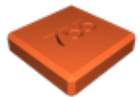
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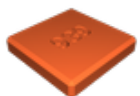
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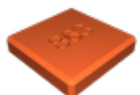
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square_0755_2.stl



square_0939_2.stl



square_0863_2.stl

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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