

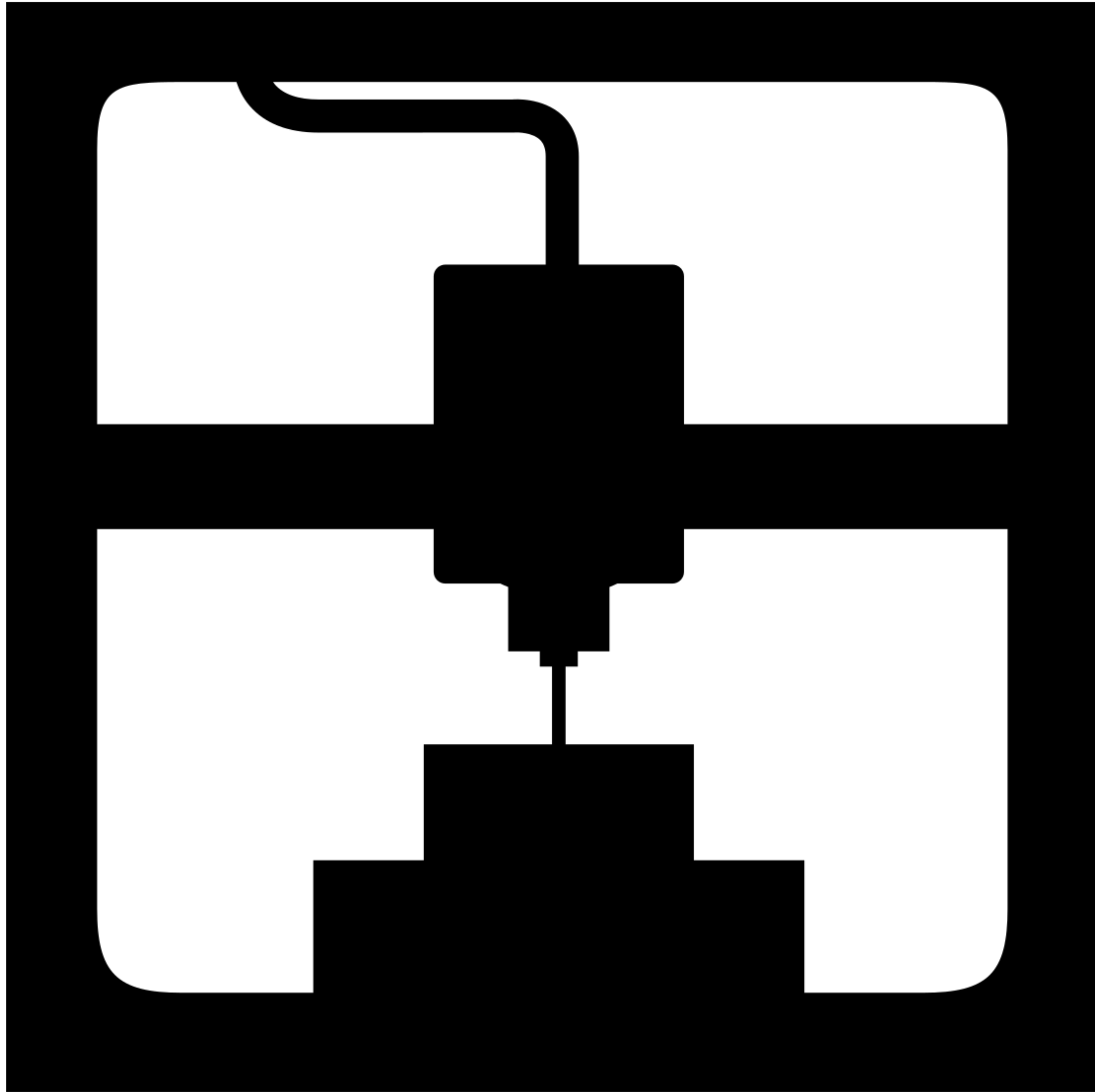
Sharing parametric models as web apps with replicad

Steve Genoud, February 4 2024

Hi, I'm Steve

<https://github.com/sgenoud>

[@stevegenoud@toot.cafe](https://t.me/stevegenoud)



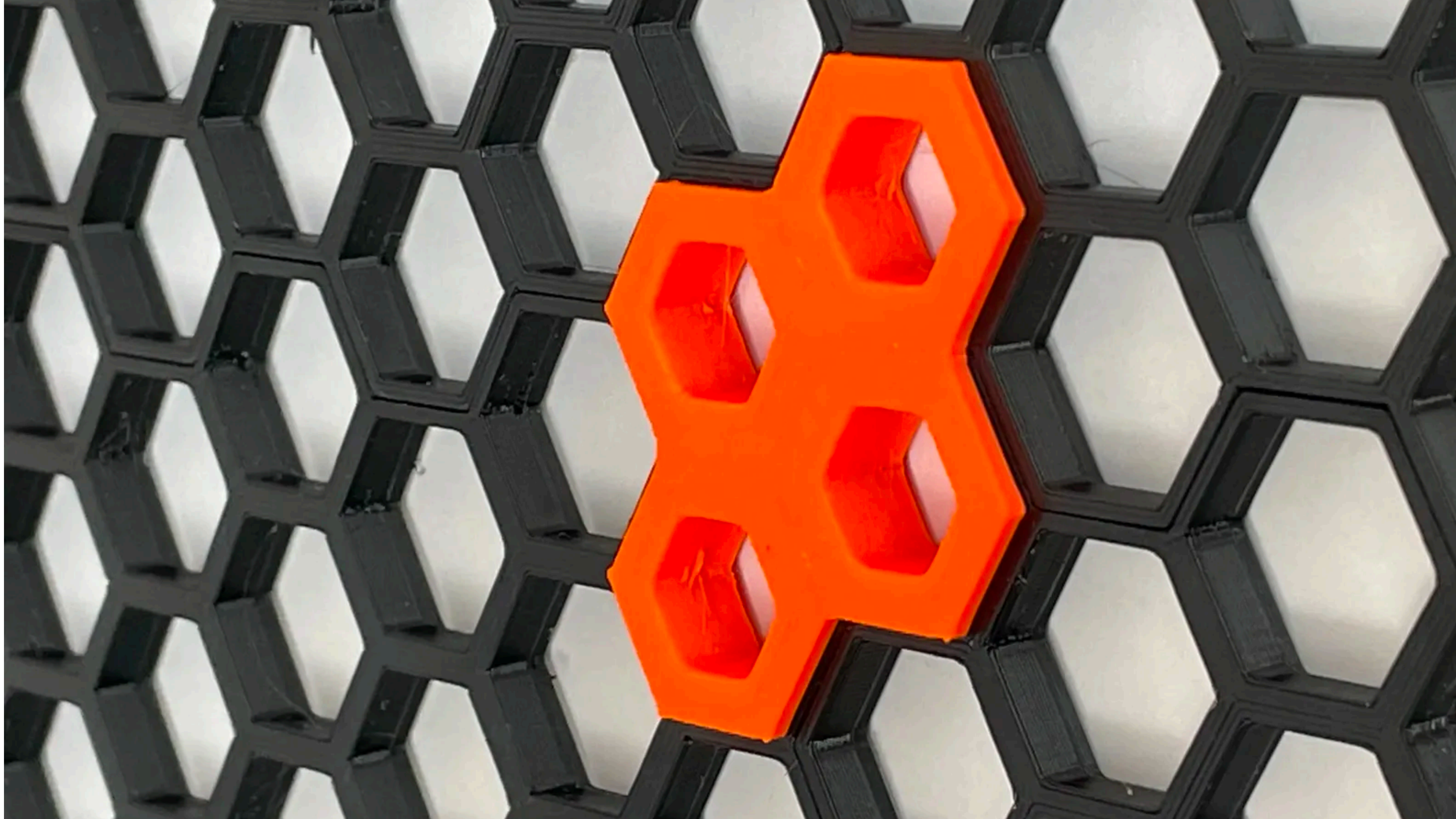


- Download the model

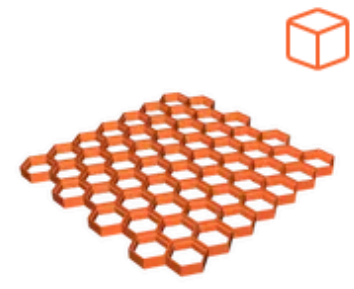
- Download the model
- Slice It

- Download the model
- Slice It
- Print It

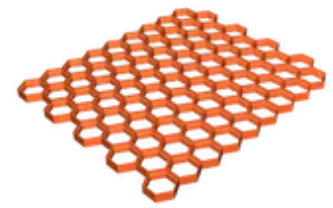




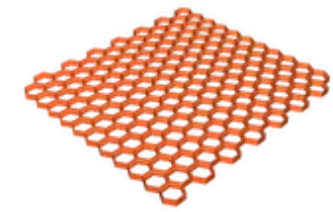




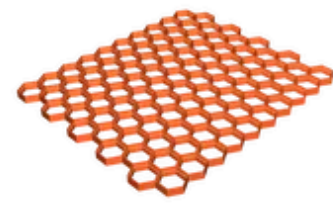
wall-honeycomb-part.stl



wall-honeycomb-224x190size(mk3s).stl



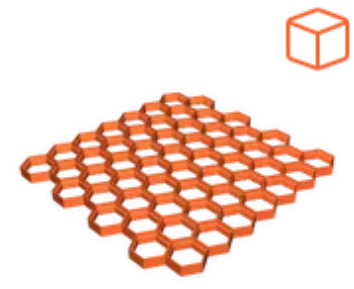
wall-honeycomb-293x271-(big-printer).stl



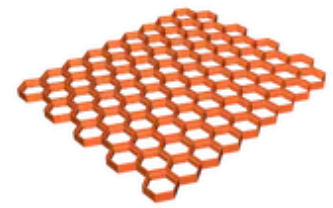
wall-honeycomb-bambu-211x248-fixed.stl



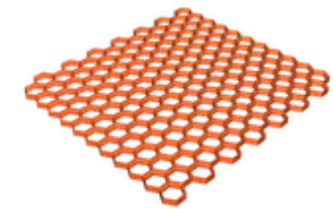
wall-honeycomb-106x89-fixed.stl



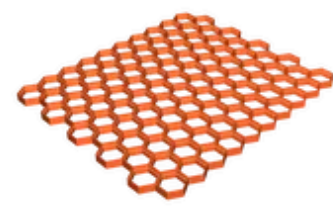
wall-honeycomb-part.stl



wall-honeycomb-224x190size(mk3s).stl



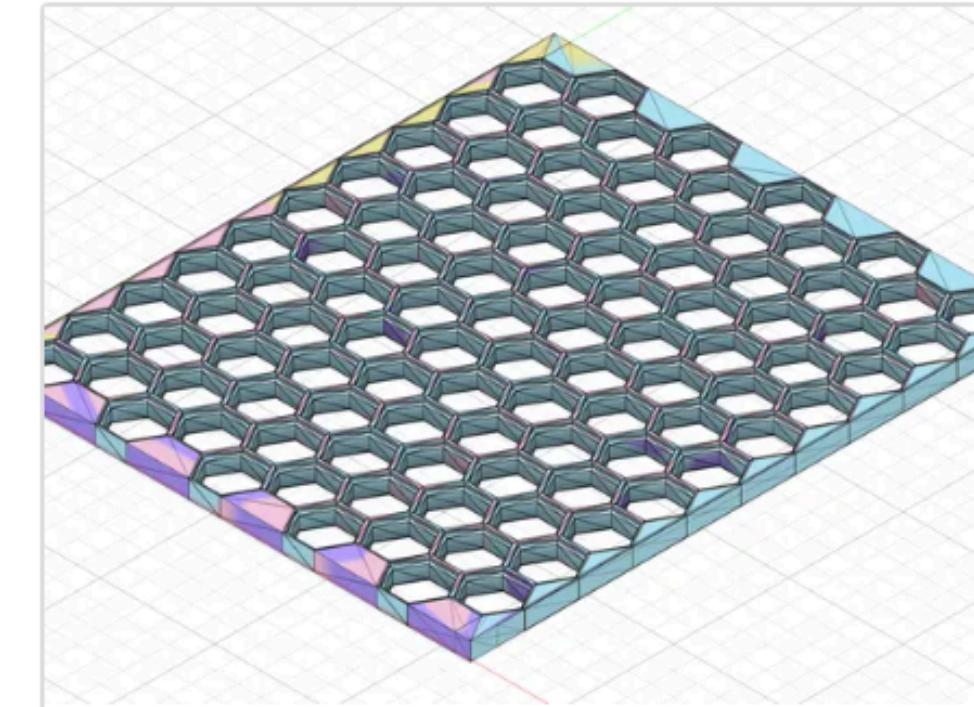
wall-honeycomb-293x271-(big-printer).stl



wall-honeycomb-bambu-211x248-fixed.stl



wall-honeycomb-106x89-fixed.stl

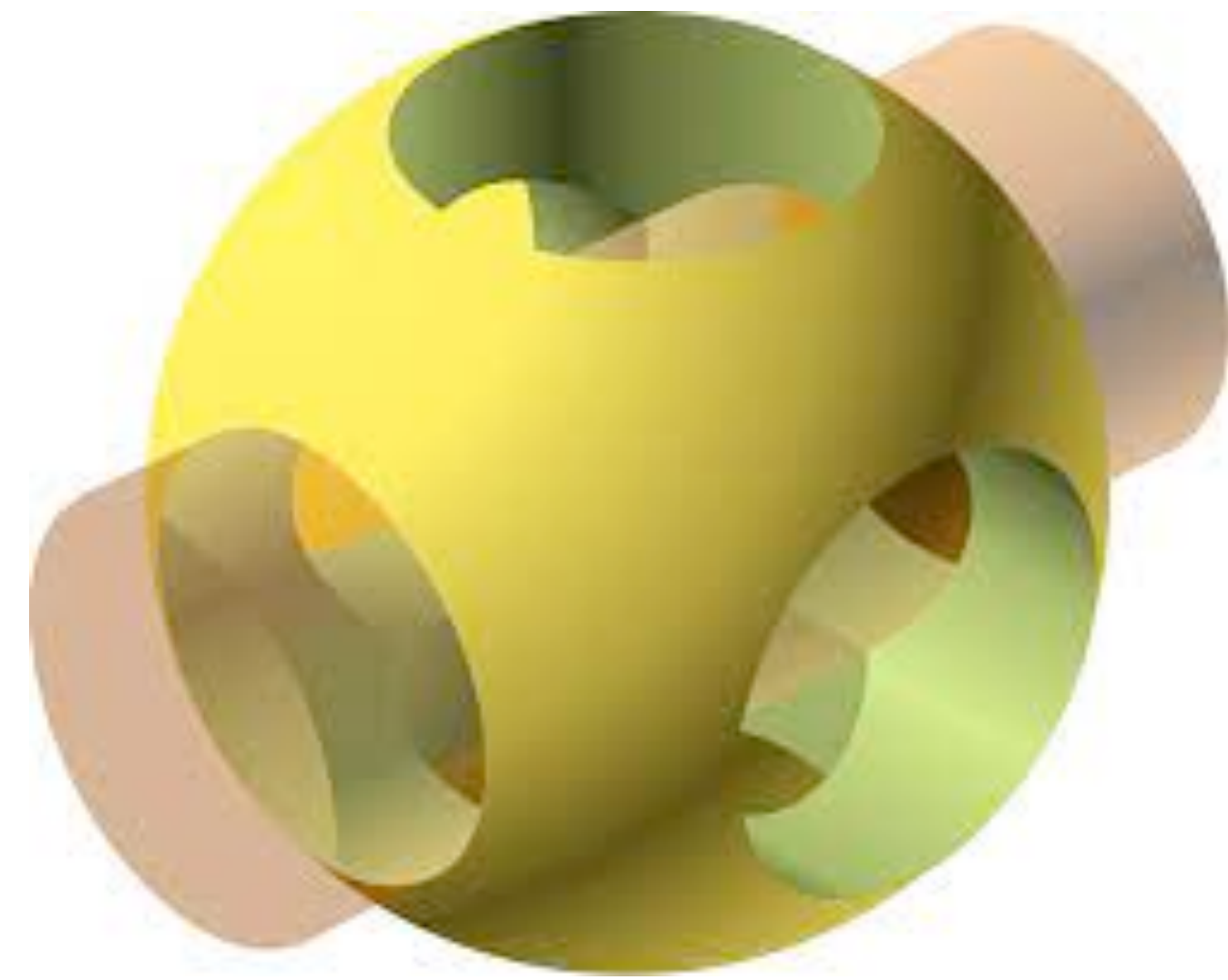


**honeycomb wall with
MORE border options**



Parametric models

Actually, it is more parametric software







- Download the model



- Download the model
- Find the hobby version of F360



- Download the model
- Find the hobby version of F360
- Download It



- Download the model
- Find the hobby version of F360
- Download It
- Get overwhelmed by a professional tool



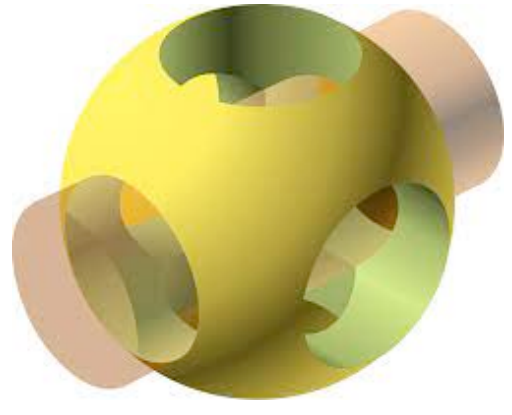
- Download the model
- Find the hobby version of F360
- Download It
- Get overwhelmed by a professional tool
- Watch some videos about modeling with CAD

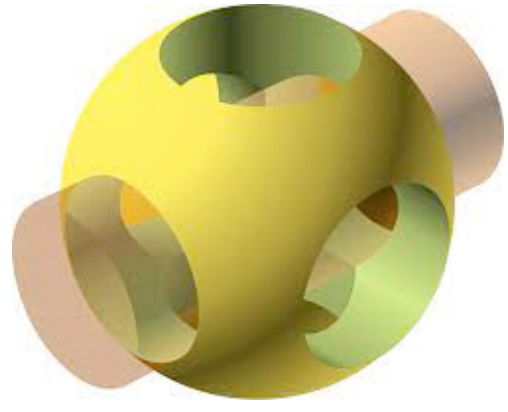


- Download the model
- Find the hobby version of F360
- Download It
- Get overwhelmed by a professional tool
- Watch some videos about modeling with CAD
- What did I want to do already?

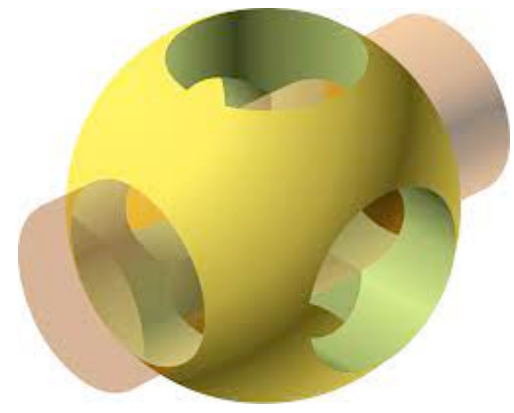


- Download the model
- Find the hobby version of F360
- Download It
- Get overwhelmed by a professional tool
- Watch some videos about modeling with CAD
- What did I want to do already?
- Abandon

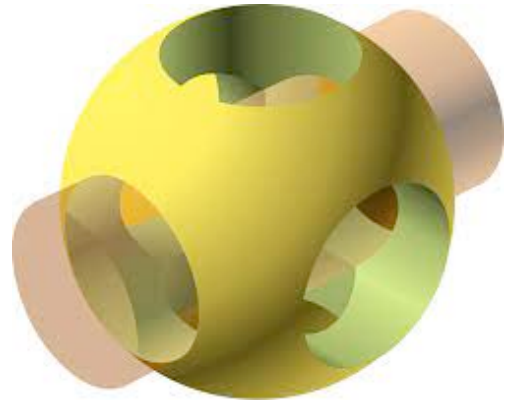




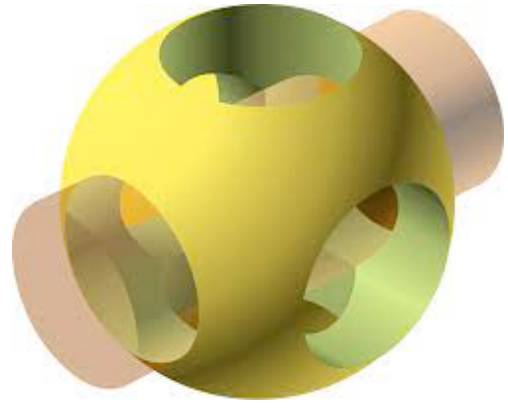
- Download the model



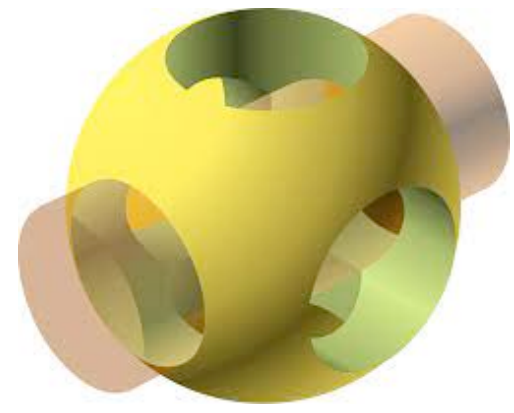
- Download the model
- Download OpenSCAD



- Download the model
- Download OpenSCAD
- Wonder what to do with this code



- Download the model
- Download OpenSCAD
- Wonder what to do with this code
- Change the wrong line



- Download the model
- Download OpenSCAD
- Wonder what to do with this code
- Change the wrong line
- Feel dumb and abandon

Lower the bar

For the end user

- Configure the model

- Configure the model
- Download It

- Configure the model
- Download It
- Slice It

- Configure the model

- Download It

- Slice It

- Print It

Web generator / configurator



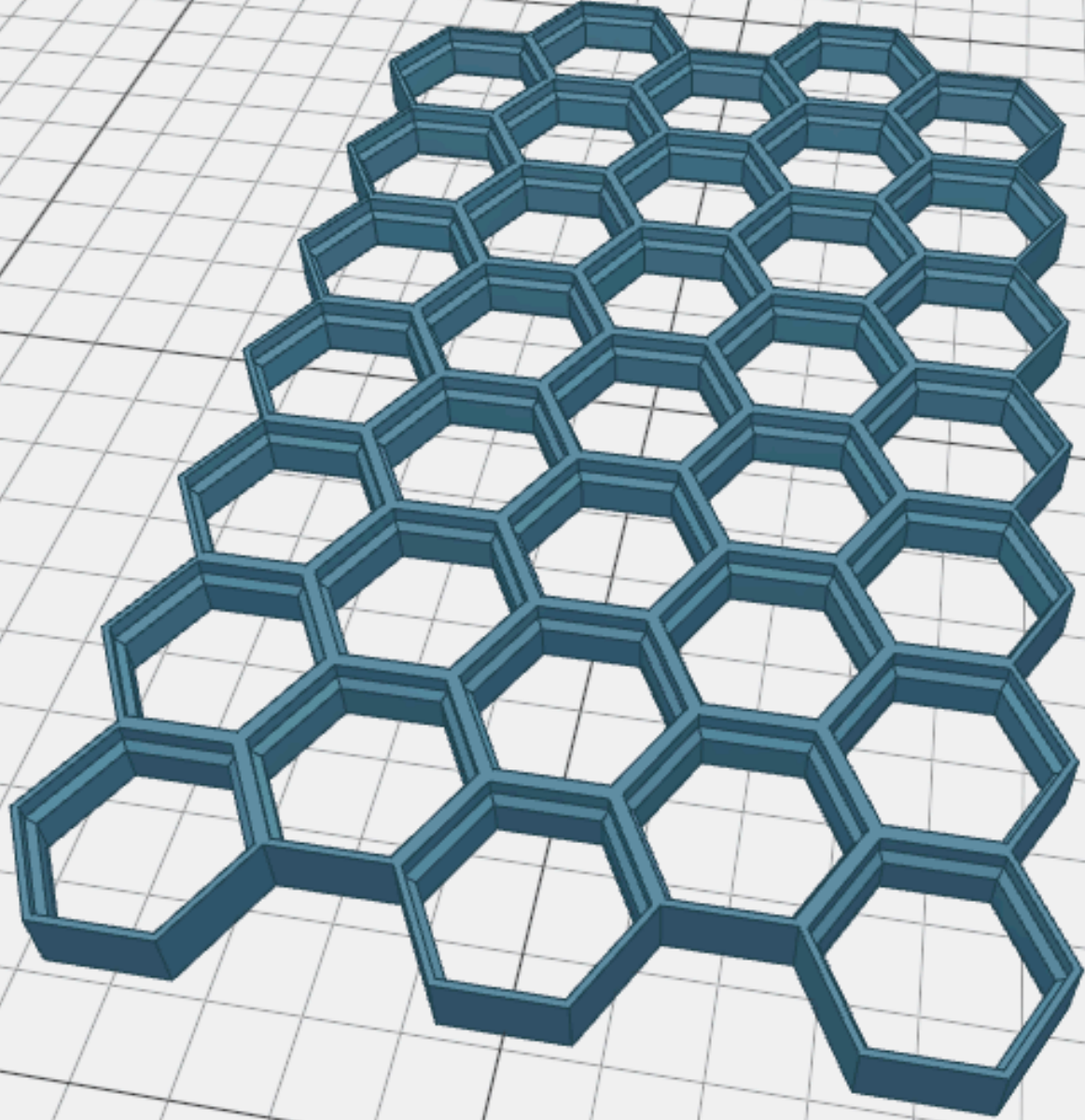
6MB

l.sgenoud.com/wall



▼ ⋮ 🔍

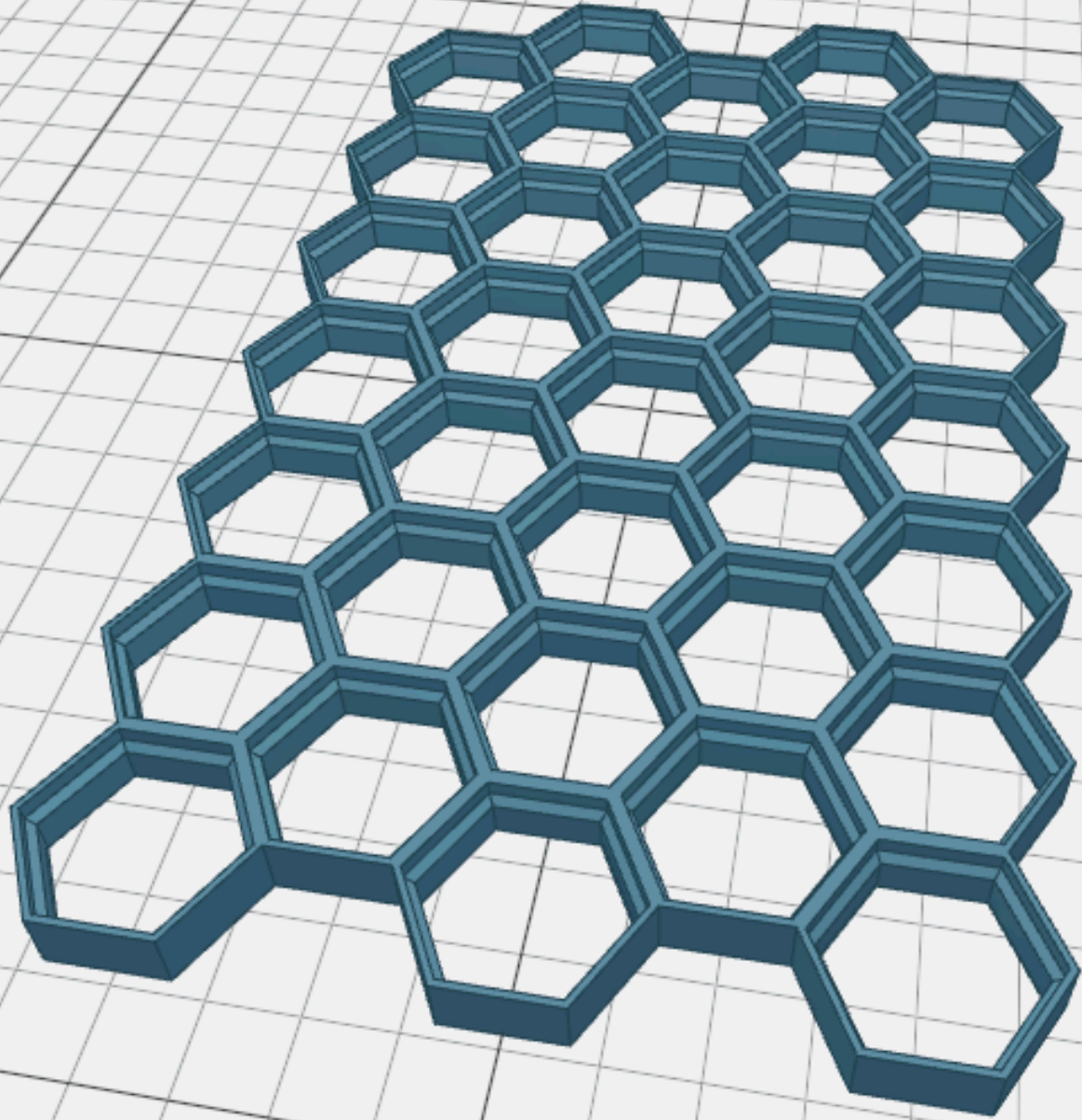
columns	v	5.0
rows	v	7.0

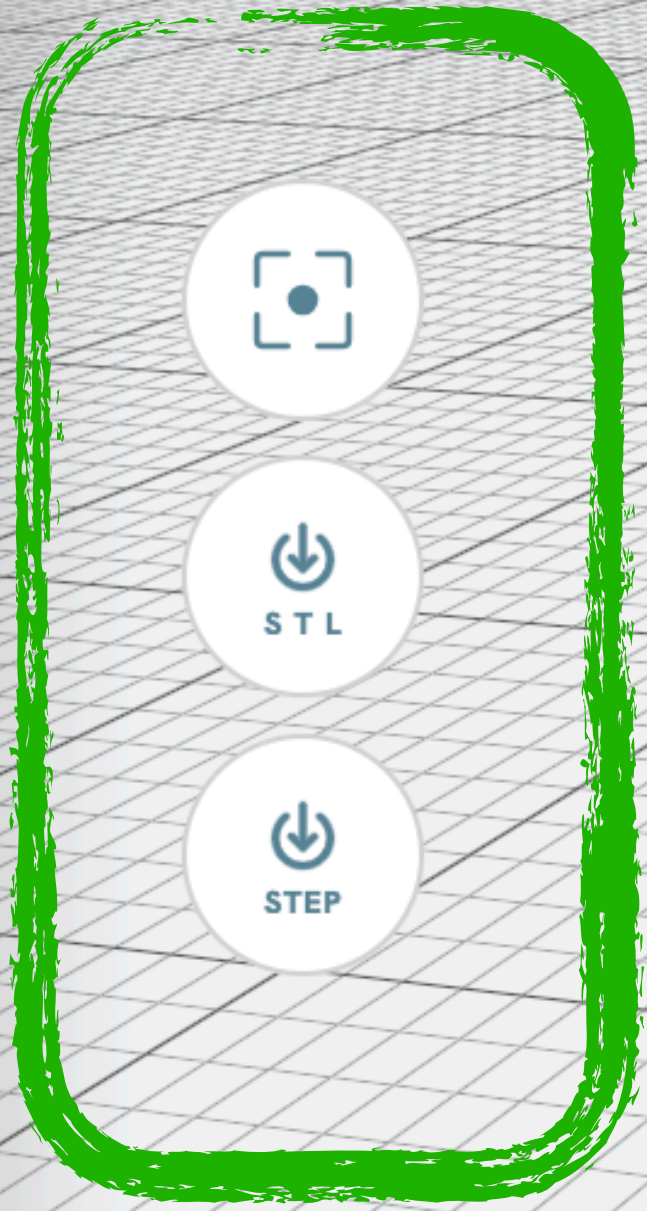




columns

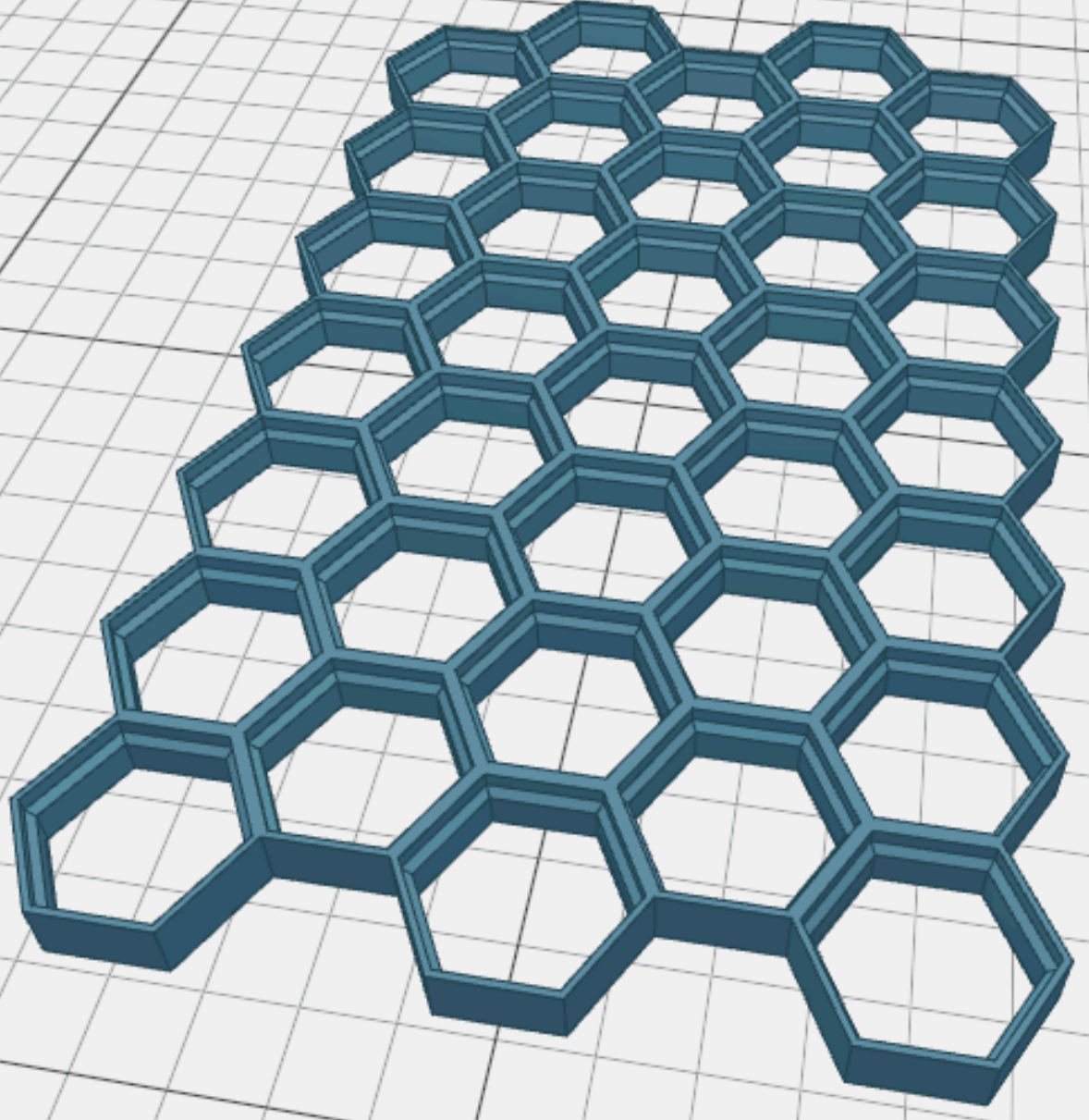
rows





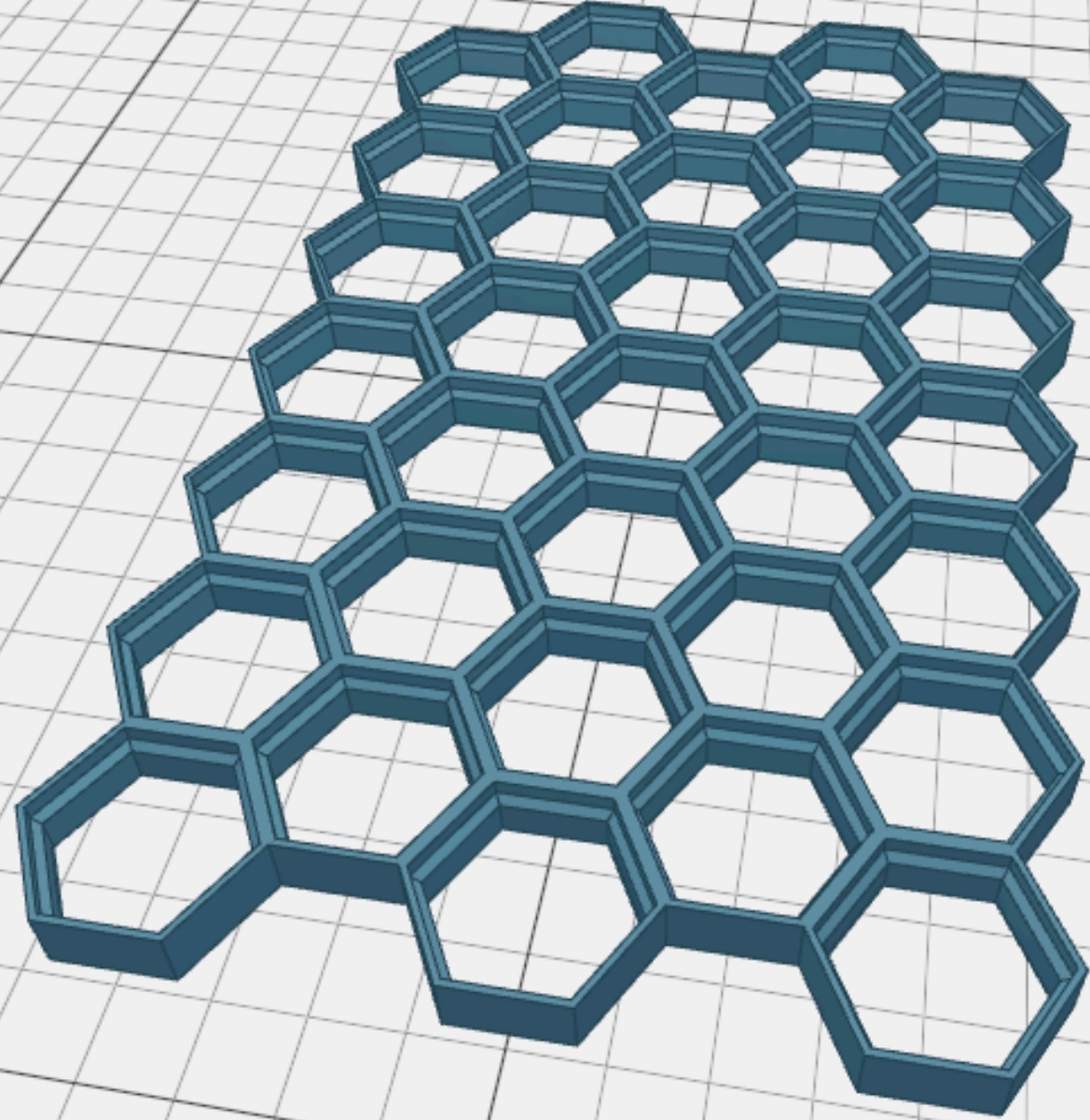
columns

rows





columns 5.0
rows 7.0



replicad | edit | source

Building your own configurator

Does not seem that easy

- Maintaining my server

Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server

Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server
- Learn to work with a kernel directly

Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server
- Learn to work with a kernel directly
- Roll my own UI

Building your own configurator

Does not seem that easy

- Maintaining my server
- Pay for my server
- Learn to work with a kernel directly
- Roll my own UI
- Low level language and care about memory management

Lower the bar

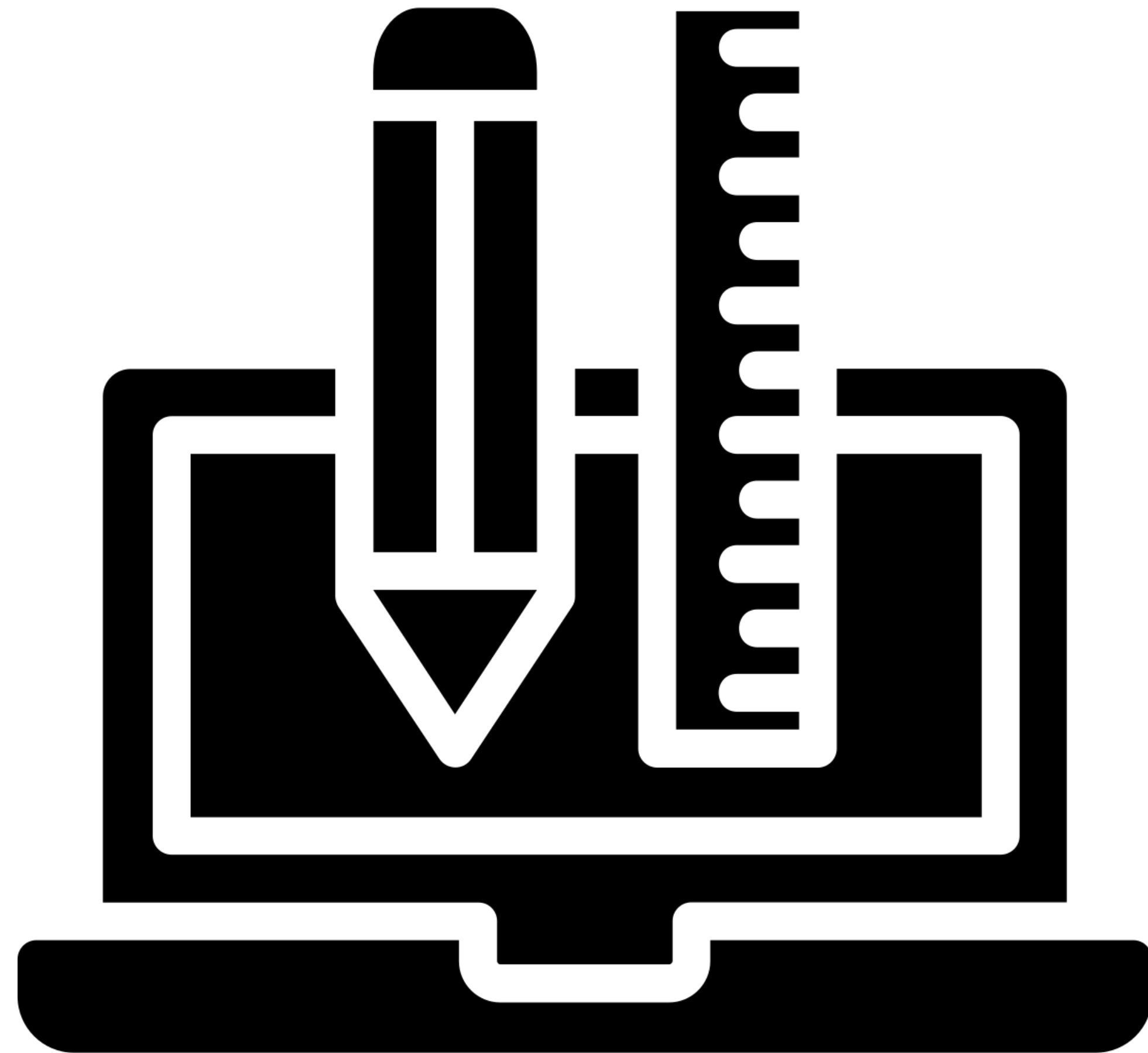
For the maker

replicad

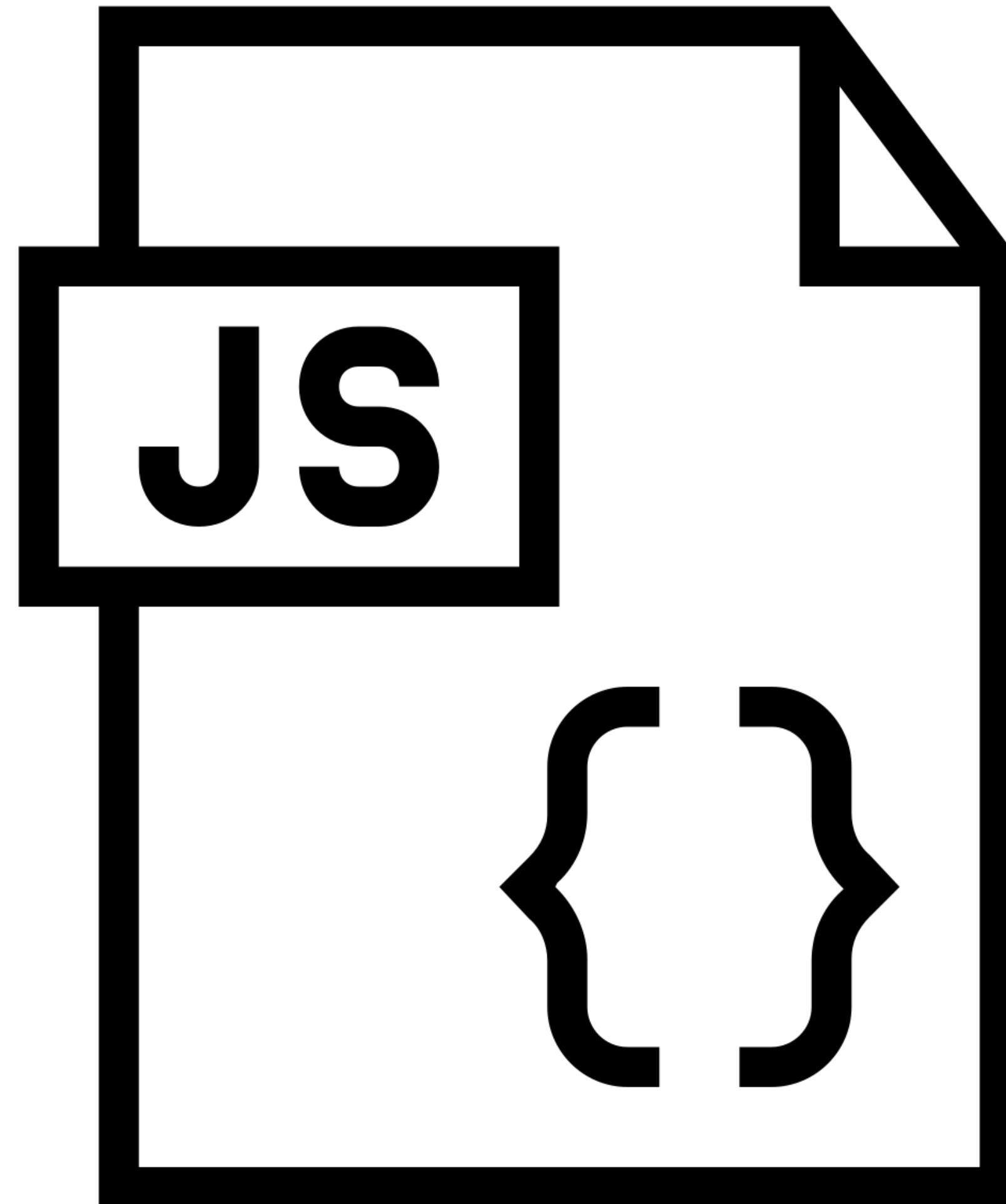
<https://replicad.xyz>

The online workbench

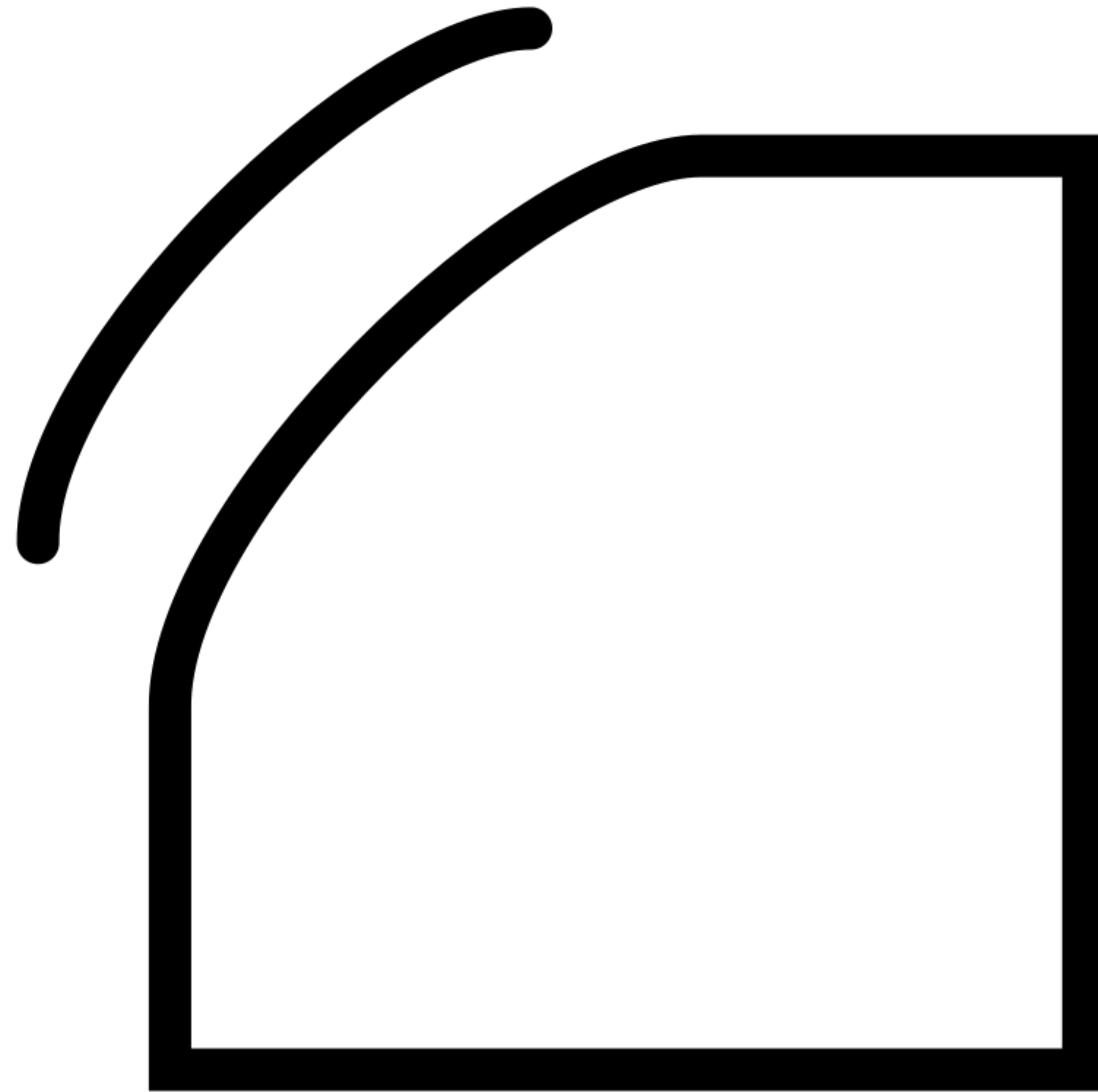
For code CAD



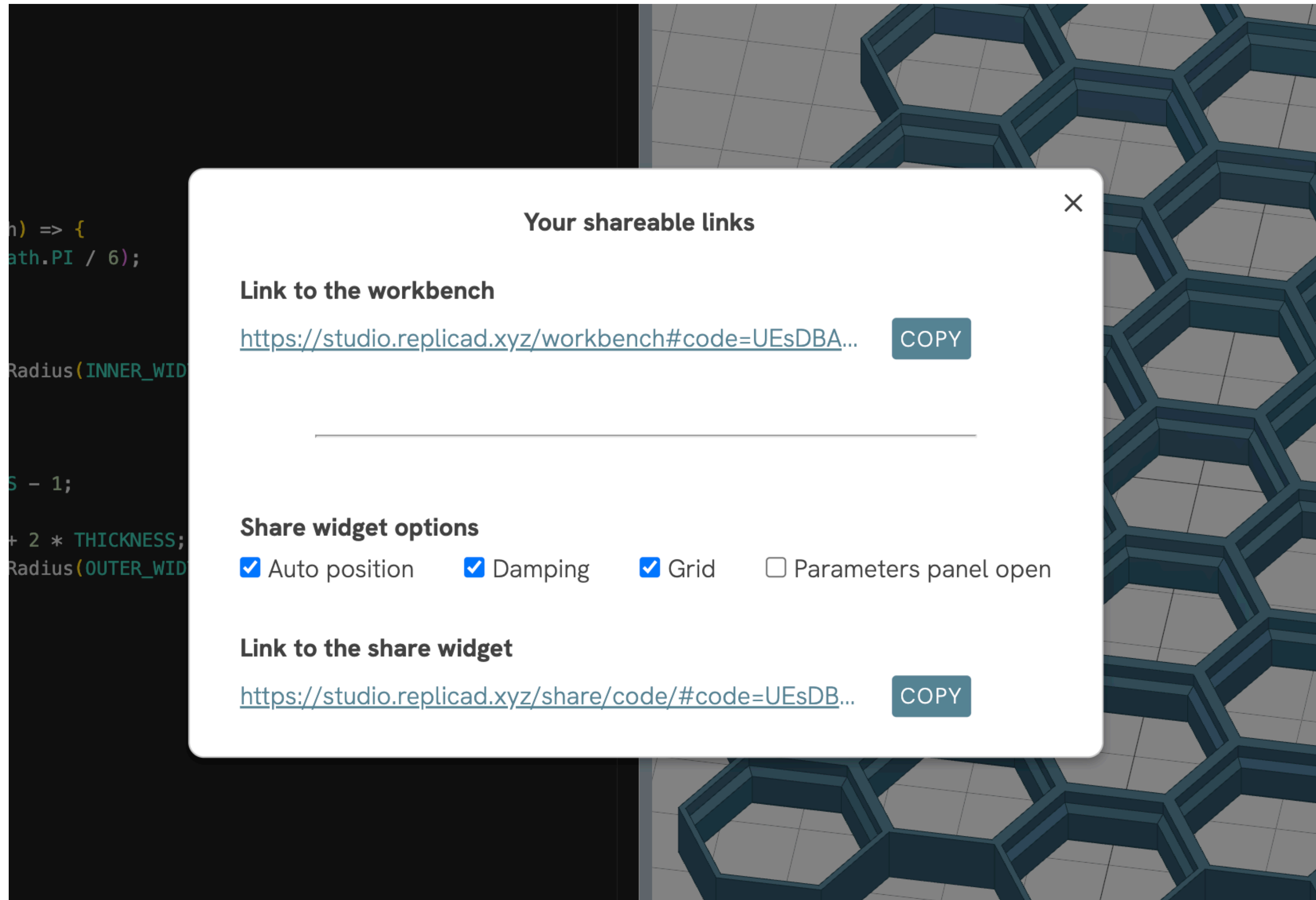
Code CAD in JS / TS



OpenCascade kernel



Builtin web configurator



Lower the bar

For myself

Lower the bar

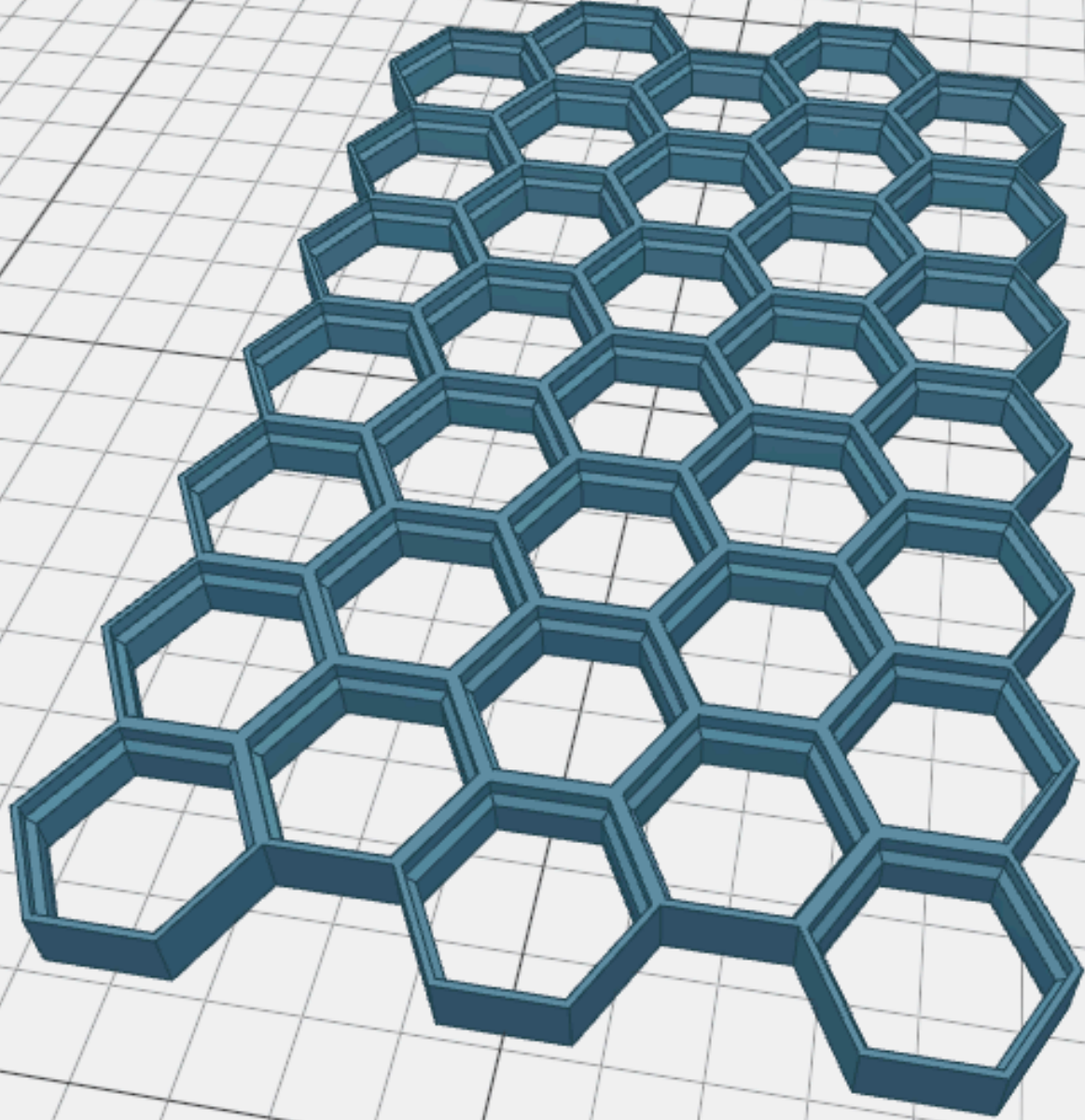
For web devs

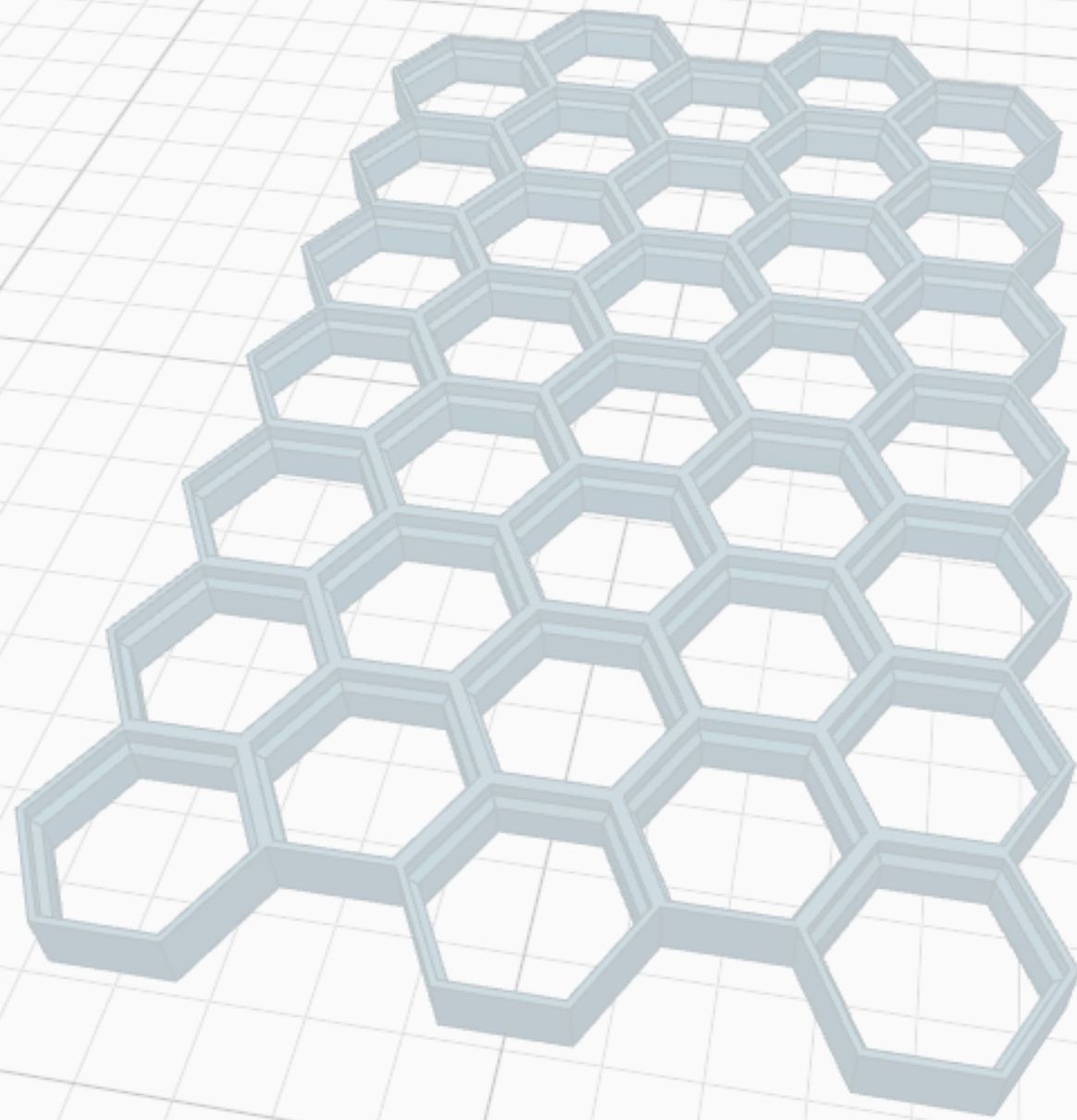
replicad is a library



▼ ⋮ 🔍

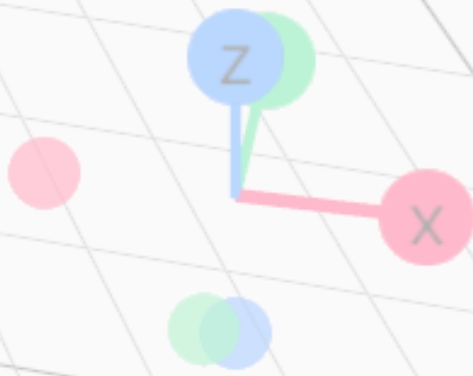
columns	v	5.0
rows	v	7.0





columns

rows



- Configure the model

- Download It

- Slice It

- Print It

Start with a bunch of maths

- Configure the model
- Download It
- Slice It
- Print It



5MB

hsw.sgenoud.com

Honeycomb Storage Wall

Navigation and download controls: a left arrow, a right arrow, and a download icon.

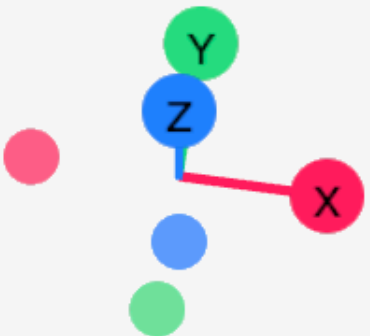
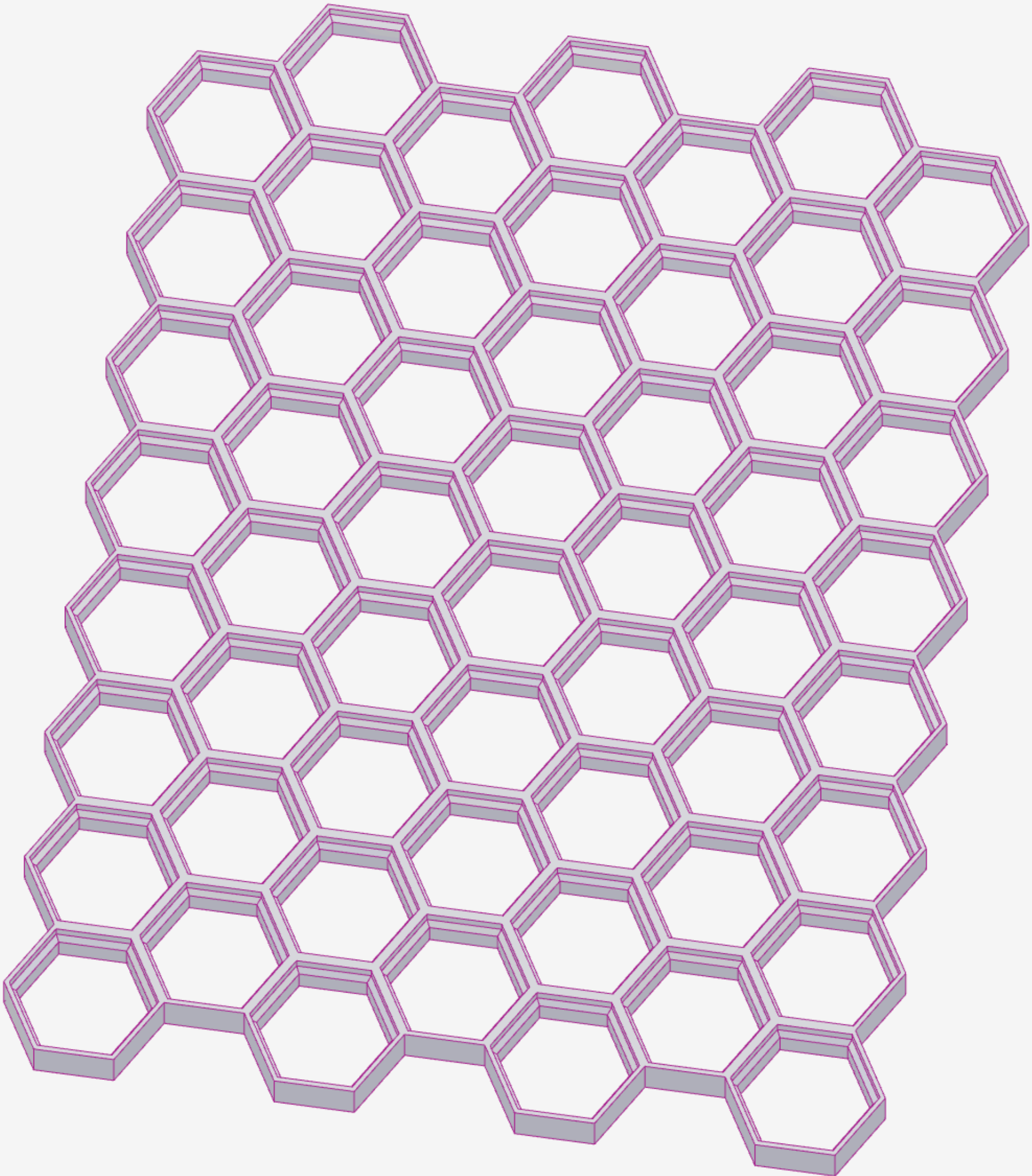
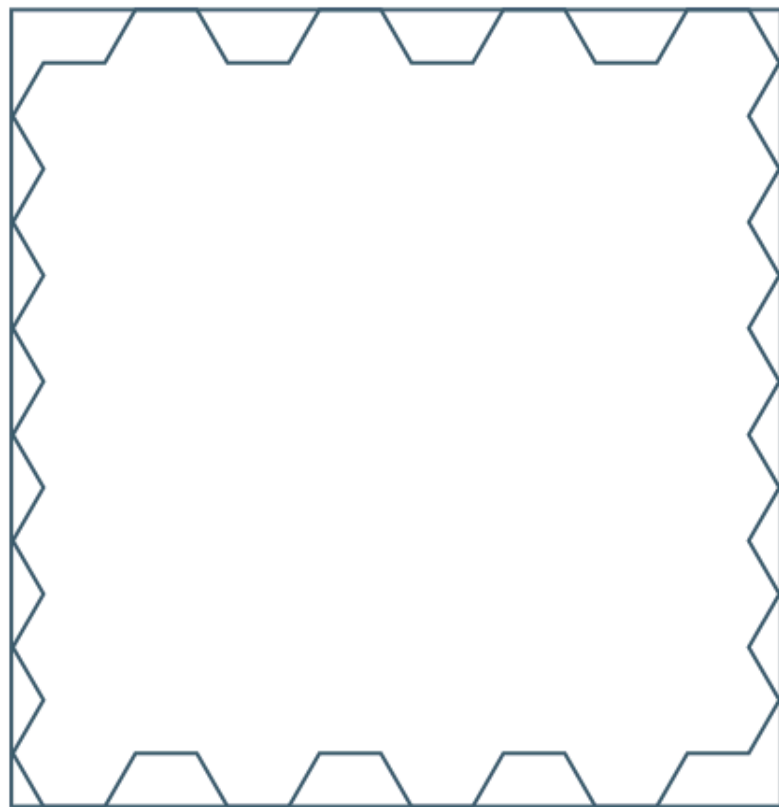
Width and Height

Apply

HEIGHT (MM)
177

WIDTH (MM)
171

7 rows, 8 columns



Honeycomb Storage Wall



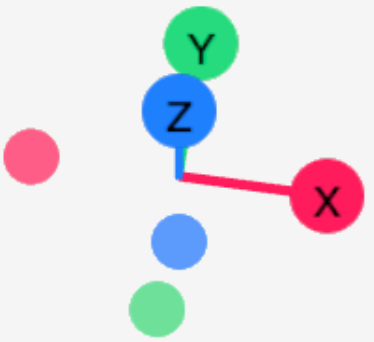
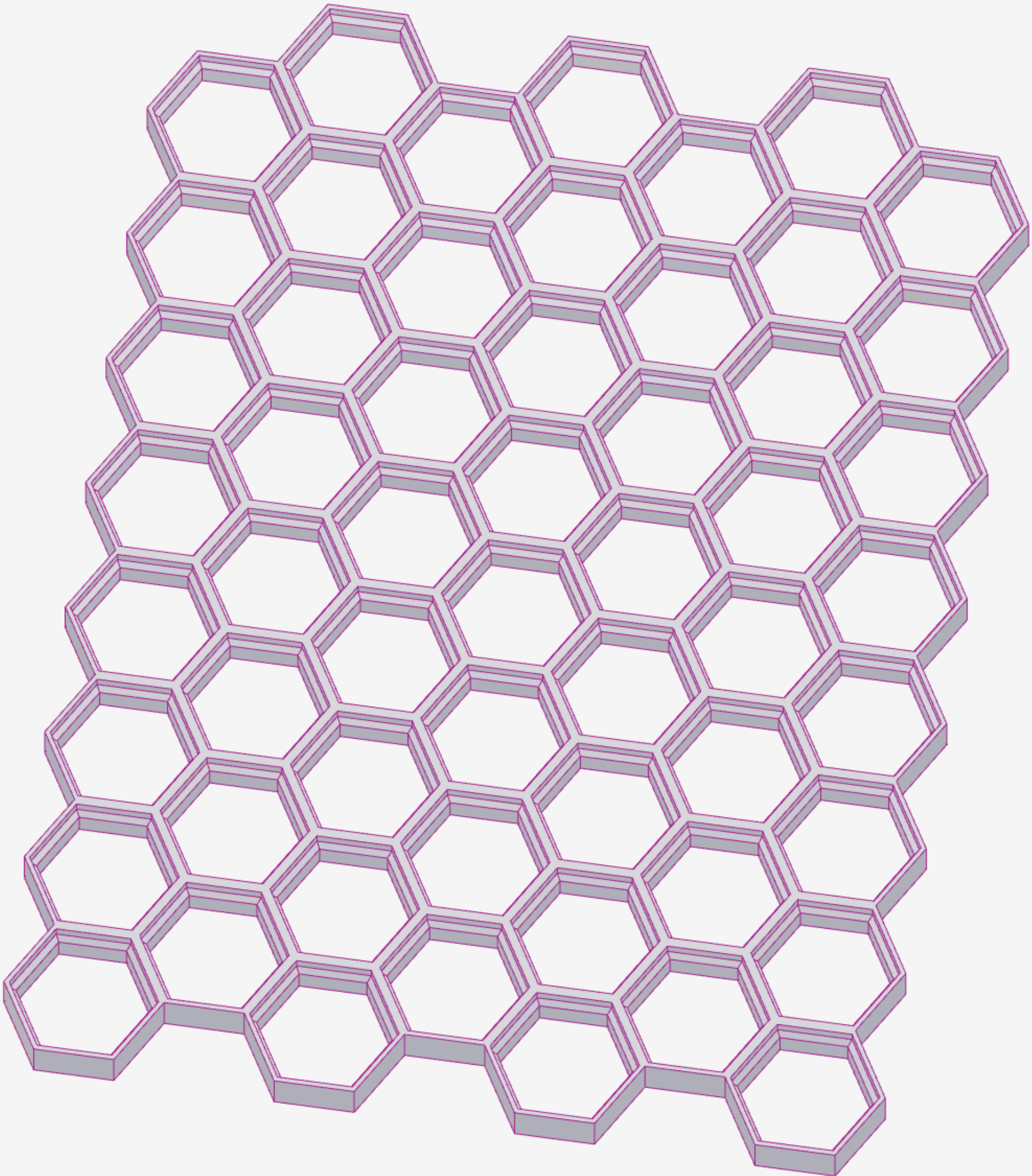
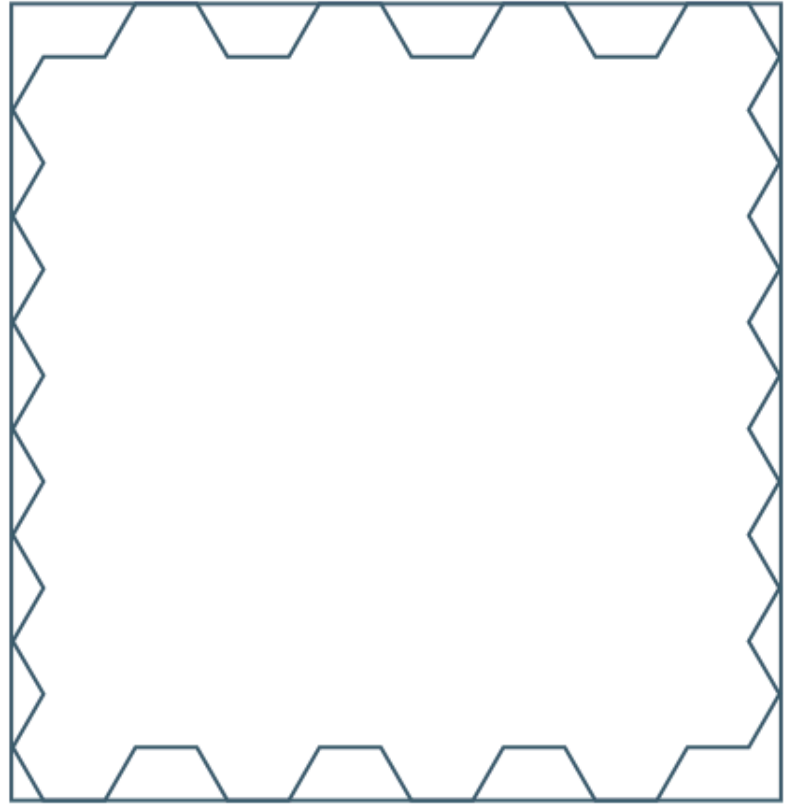
Width and Height

Apply

HEIGHT (MM)
177

WIDTH (MM)
171

7 rows, 8 columns



Honeycomb Storage Wall



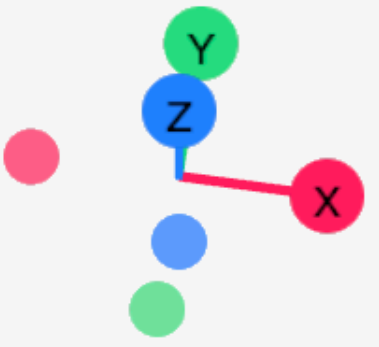
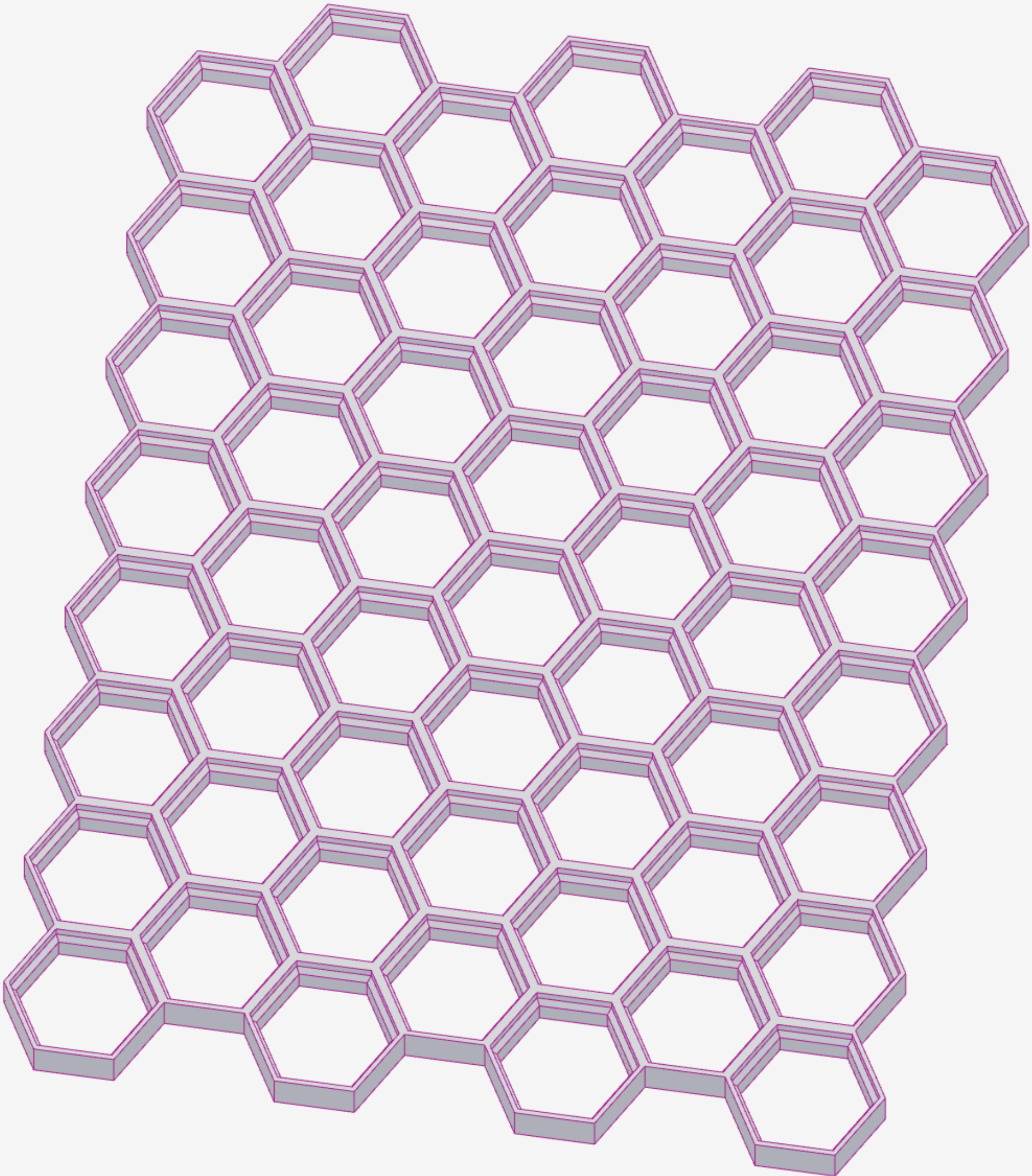
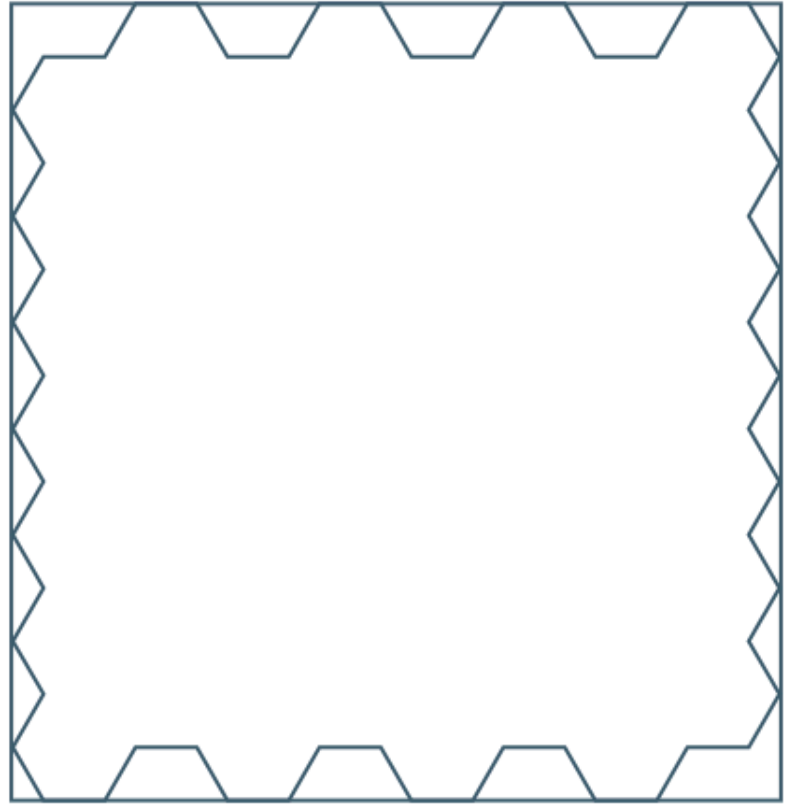
Width and Height

Apply

HEIGHT (MM)
177

WIDTH (MM)
171

7 rows, 8 columns



Honeycomb Storage Wall



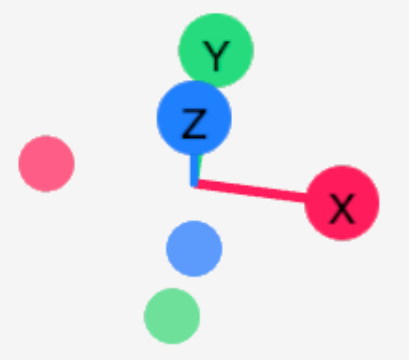
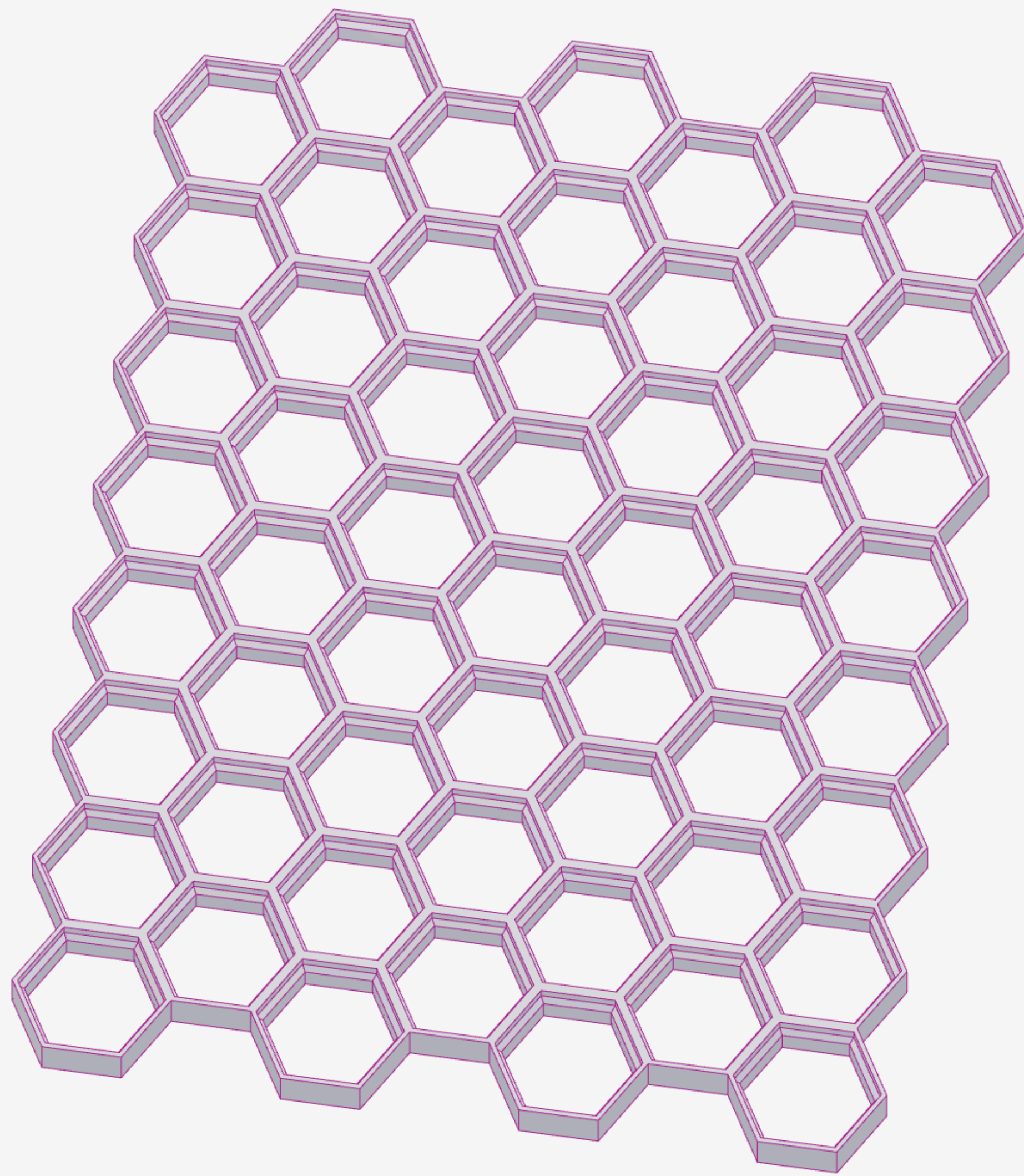
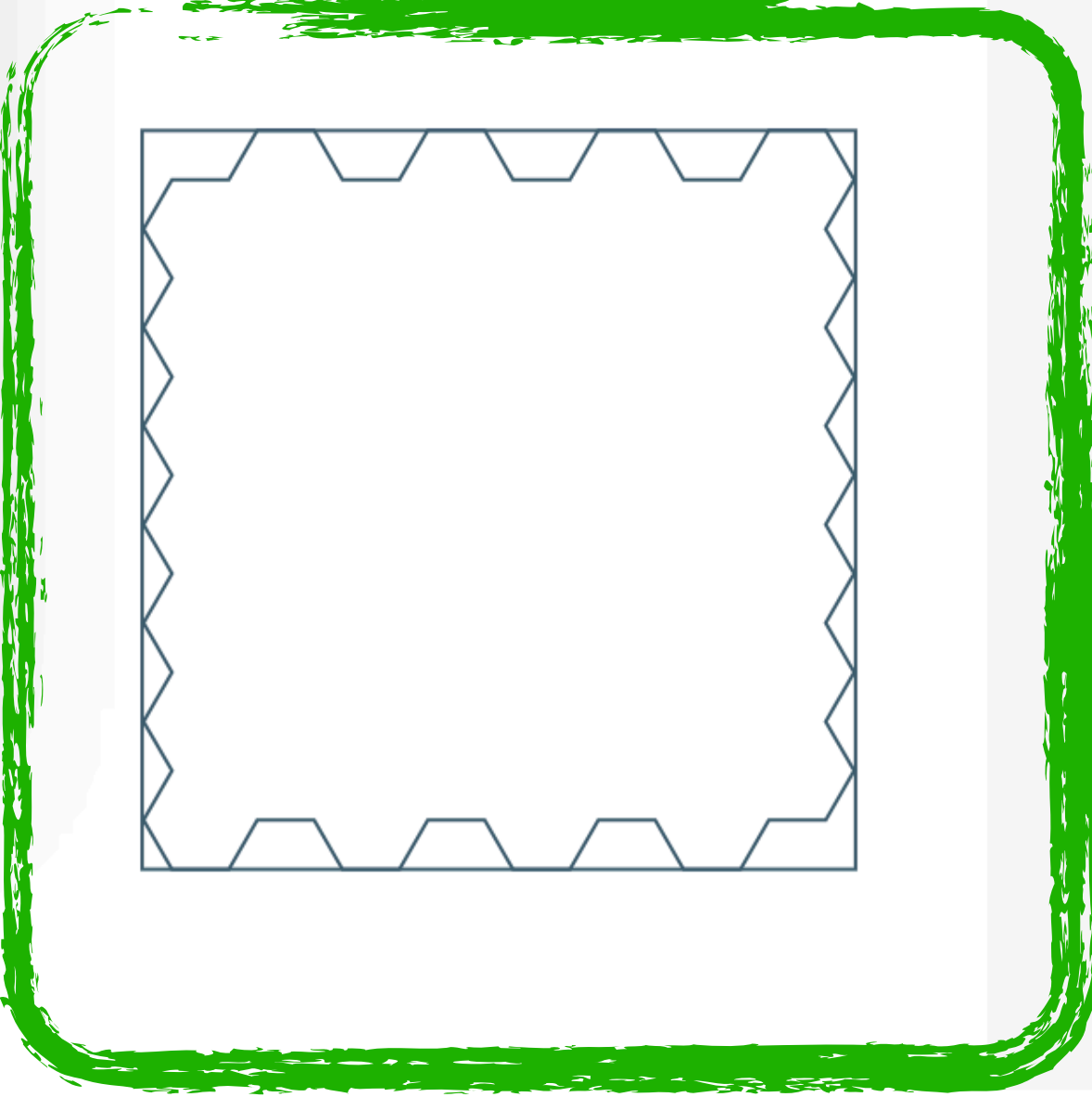
Width and Height

Apply

HEIGHT (MM)
177

WIDTH (MM)
171

7 rows, 8 columns



CAD as another web API

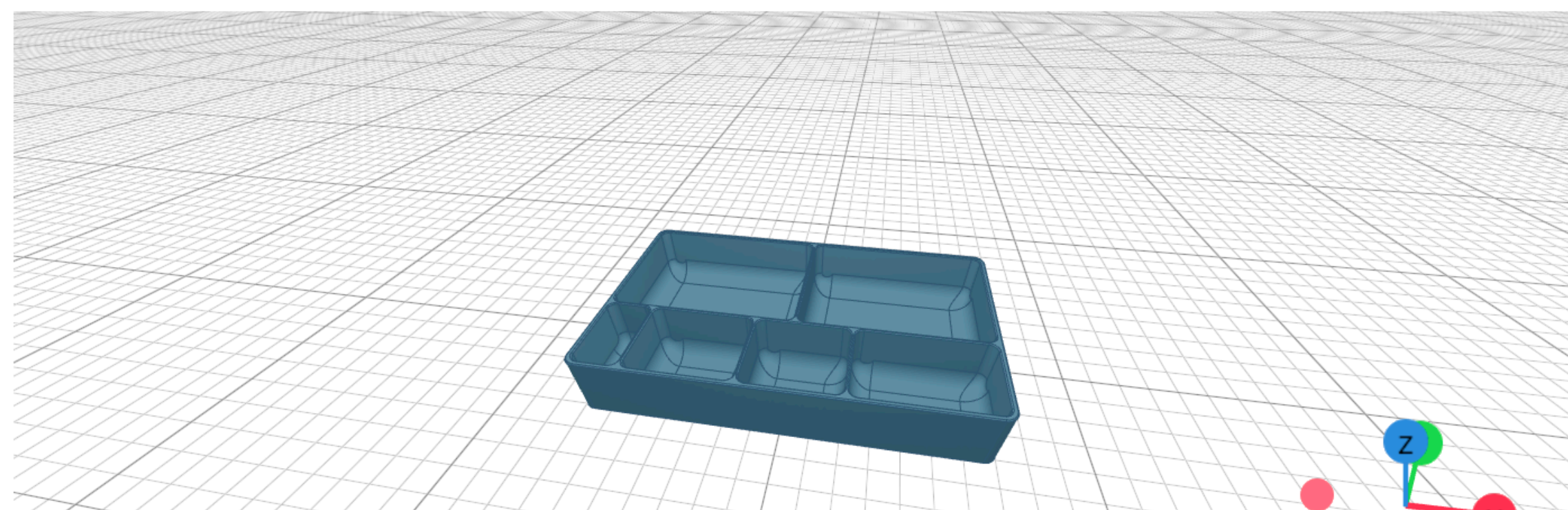
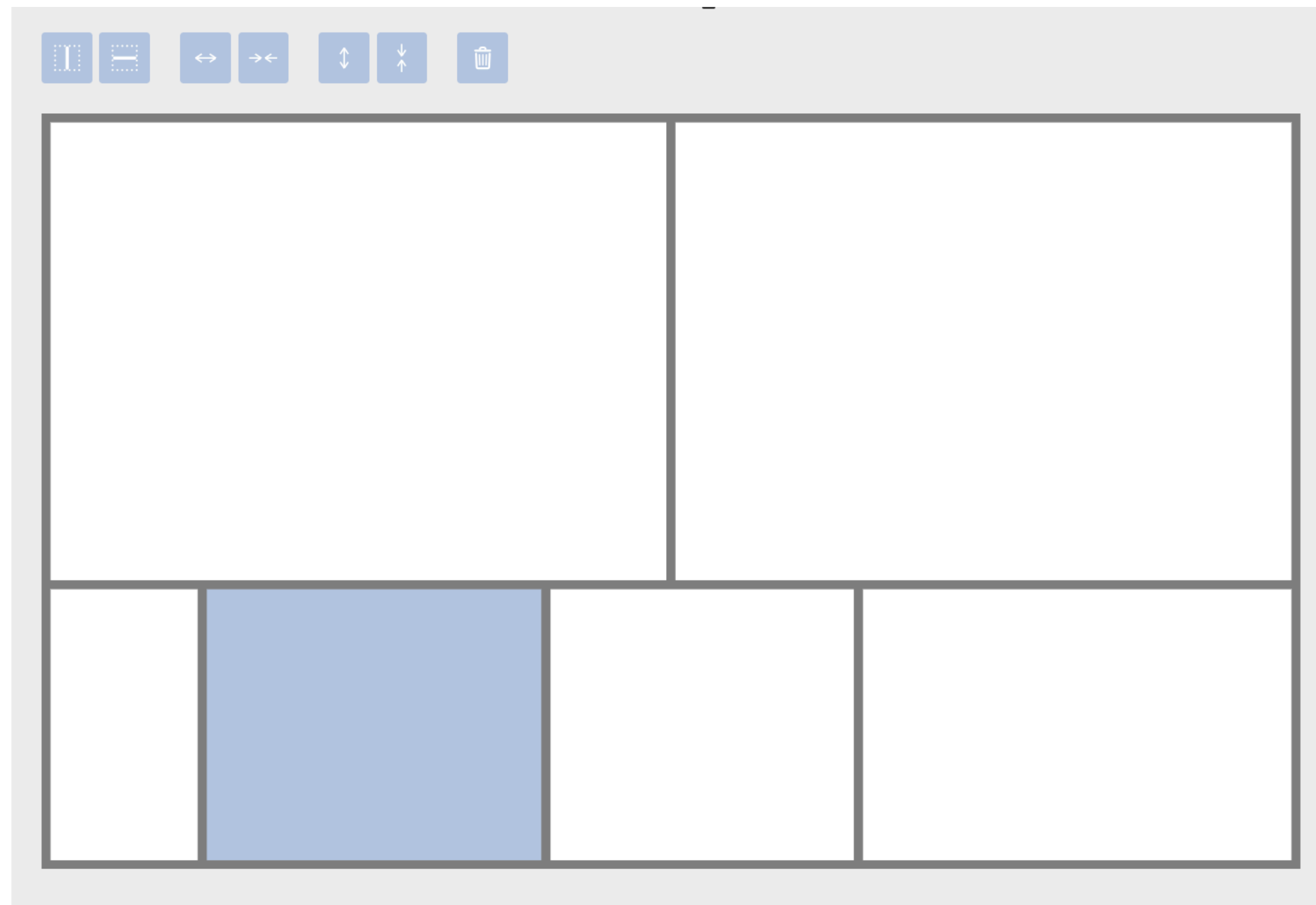
Advanced

DEPTH
 mm

HEIGHT
 mm

WIDTH
 mm

LID TYPE
 ▾



deckinabox.sgenoud.com

Take home message

Take home message

- There is no wrong way to sharing your stuff

Take home message

- There is no wrong way to sharing your stuff
- We can lower the bar when sharing parametric model as a configurator

Take home message

- There is no wrong way to sharing your stuff
- We can lower the bar when sharing parametric model as a configurator
- If you are code cad curious maker, have a look at the replicad workbench

Take home message

- There is no wrong way to sharing your stuff
- We can lower the bar when sharing parametric model as a configurator
- If you are code cad curious maker, have a look at the replicad workbench
- If you are a web dev replicad as a library is worth having a look at

@stevegenoud@toot.cafe

Thanks!

<https://github.com/sgenoud>

<https://replicad.xyz/>