

# Gear Cube Fidget Toy



by Ruven Bals

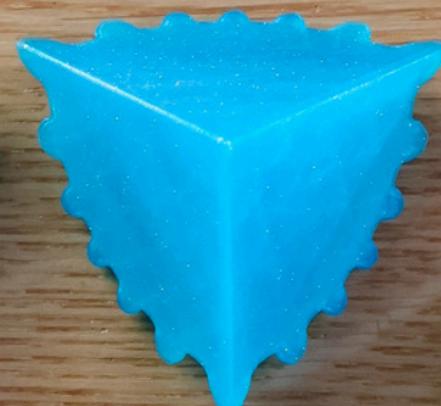
# Assembly Video You need:

Filament Used

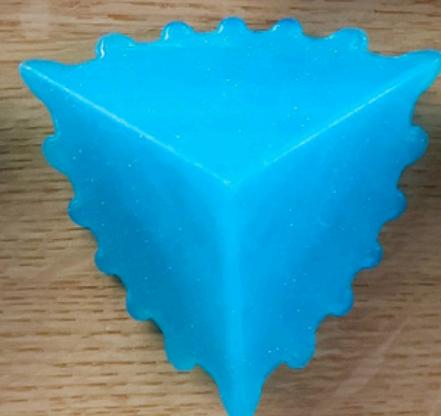
Protopasta

Marine Dream

Big Gear



Small Gear



Heart

Connector



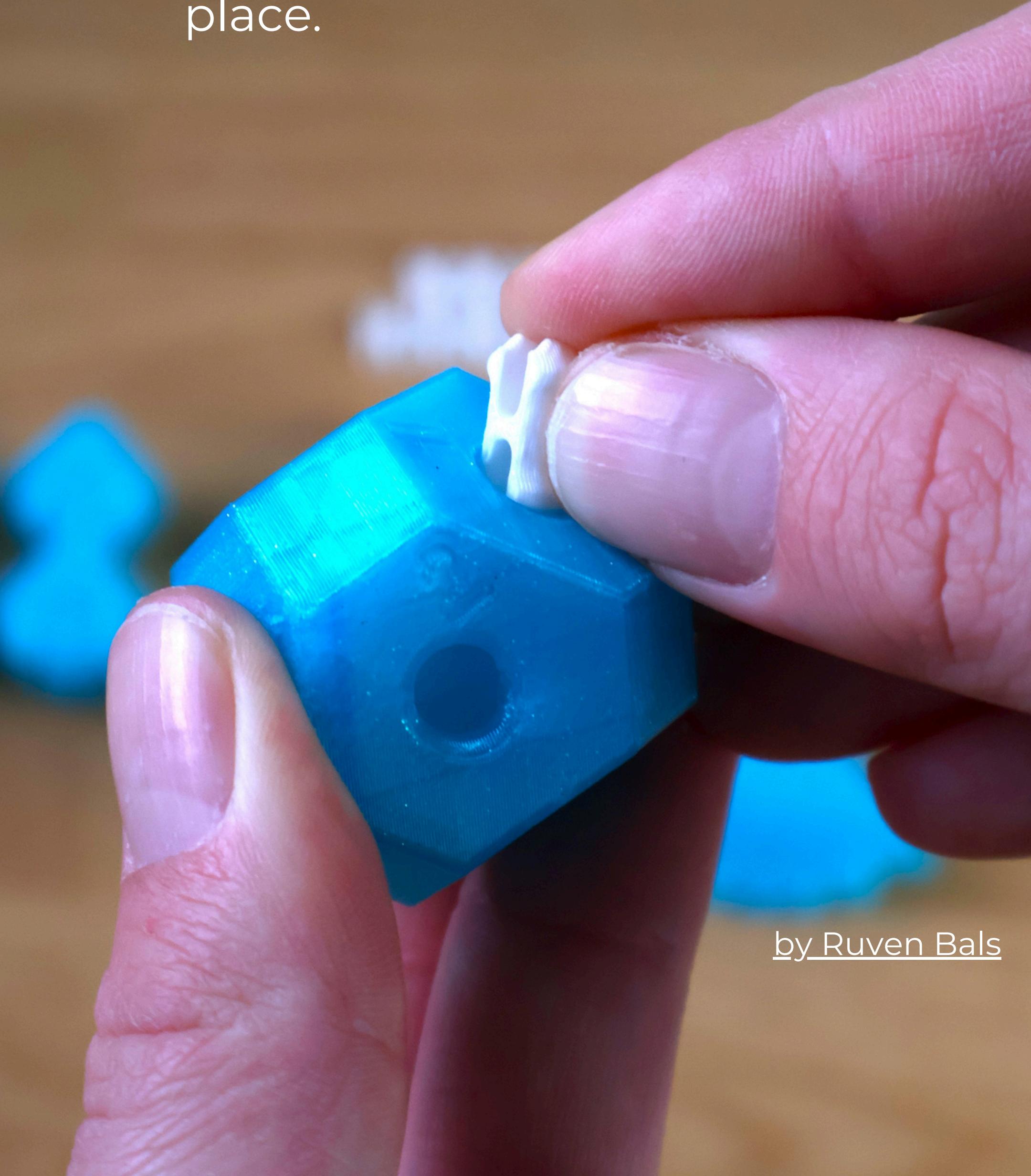
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Print Settings:

Standard Settings for your Printer and Filament. You may need a brim. No Supports.

## Step 1:

- Take The Heart and push a Connector into a random Hole.
- It should click inside and stay in place.



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## Step 2:

- Do Step 1 for all Holes and all Connectors

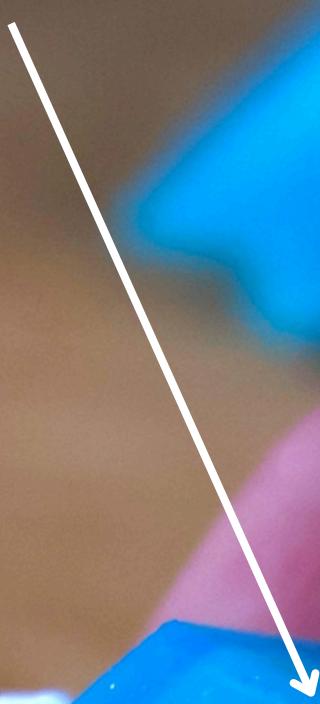


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### Step 3:

- Find a Connector on a face with Number 1
- Push a Big gear on top of this Connector

Number 1



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## Step 4:

- Repeat step 3 for all Big Gears and all Faces with Number one. Look at the next picture to see how that should look.

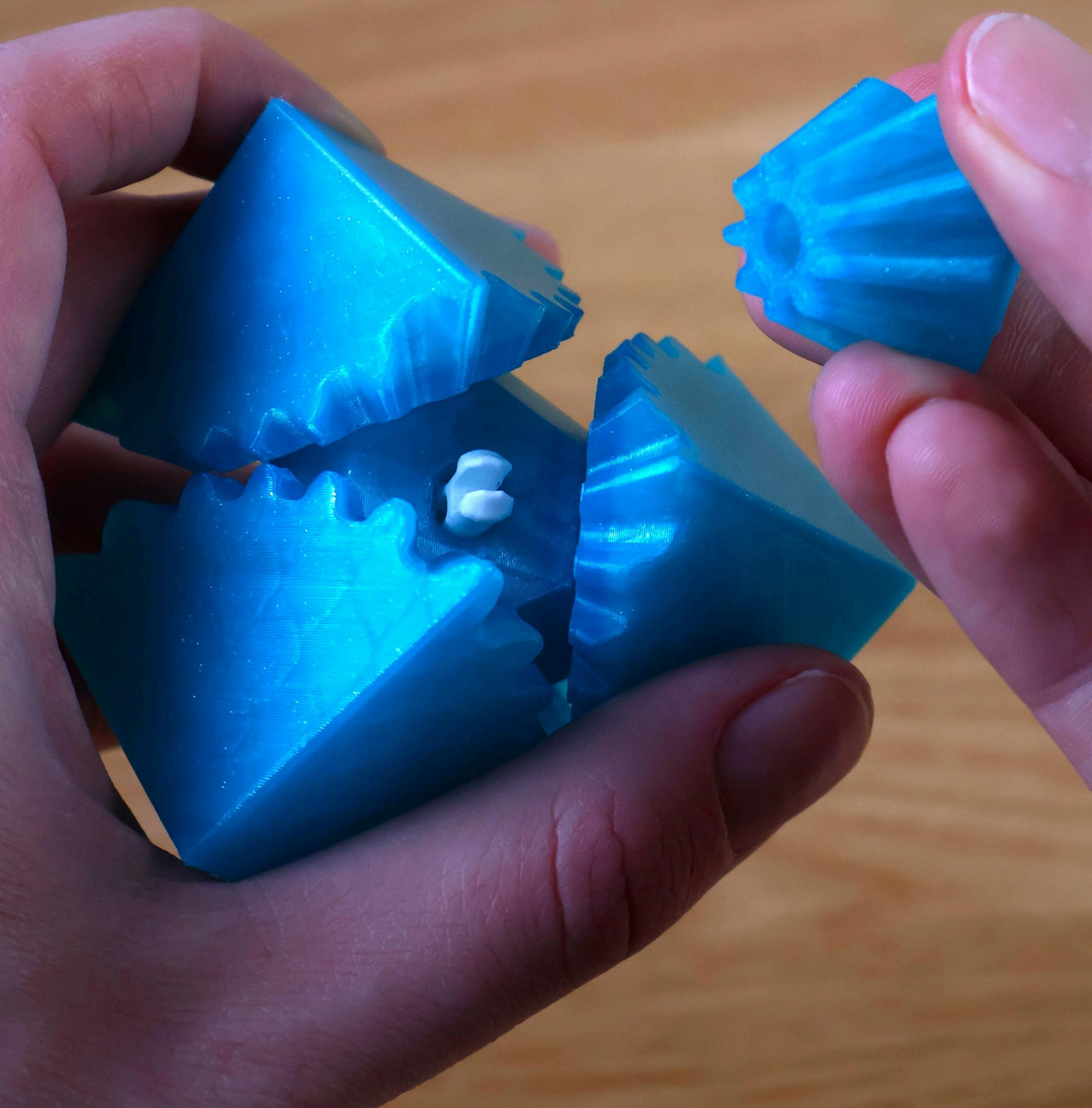
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## Step 5:

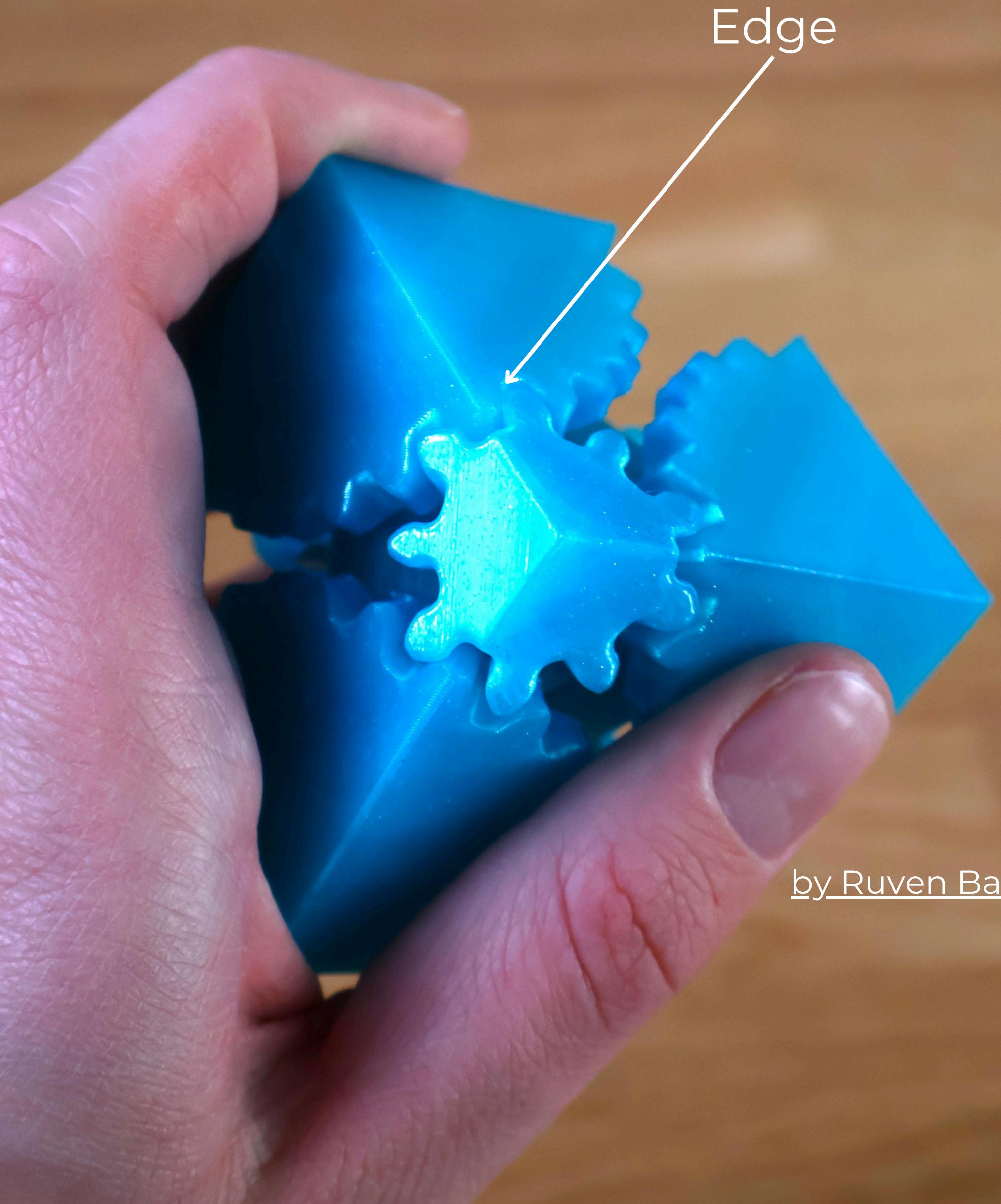
- Rotate the Big Gears untill they look like below.
- Take a Small Gear and push it on top of the Connector in between.

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## Step 6:

- Align the Edges of the Cube until they look like below.



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## Step 7:

- Do step 5 and 6 for all Small Gears on the remaining Faces.



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Enjoy your new Gear Cube.

Don't forget to follow me on  
thangs.

If something didn't work, read  
the next page.



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# Gear Fidget Troubleshooting

## **Connectors Break:**

The best solution to this is printing them in PETG. Or something else stronger than PLA. ABS, ASA, Nylon, whatever you have playing around. If you don't have anything other than PLA, try using different print settings. Adding more Walls or infill might work. In the "Troubleshooting" Folder included in the download, there are also a few more stronger Connectors than the standard Connector included in "Files".

## **Connectors are too long or too small:**

Try Scaling the Connectors in your slicer until they fit into the holes.

## **Fidget is too difficult to turn or too loose:**

I made a Video on this you can watch that here:

<https://youtu.be/mJWSU6X7Piw>

Your fidget might need a lot of strength to turn, or it's way too easy to turn, and that causes the Gears to lose their arrangement when you play with it. You will need to print a new Heart from the "Troubleshooting" folder to fix this.

## **Too hard:**

If your Fidget is too difficult to turn, with means too tight, then try printing a heart that is +(Plus) sized. For example, +2. This Heart is going to space the gears a little further apart, and this should fix your issue. Take the gears off the Fidget and reassemble your Fidget with the new Heart. Now see if it got better. If it got a little better, but It's still not perfect, go even higher, like +4. If it got worse, you might have taken the wrong direction.

## **To loose:**

If your Fidget is too loose and your Gears get disarranged after a few rotations, you also need to print a new heart from the "Troubleshooting" Folder.

This time, take a Heart that is in the -(Minus) Digits. For example, print -2. Then disassemble your Fidget and reassemble it with your newly printed -2 Heart. Your Fidget should now be more tight because the Hearts in the minus digits are going to space the gears tighter together the lower you go. If it's still not tight enough, repeat this step with even lower numbers like -4 until the issue is Fixed.

If it got worse, you might have taken the wrong direction.

## **Why there did it not work from the start?**

It is sadly impossible to design something that works for everyone. Even I need to go through this sometimes.

Slight differences in Filament extrusion can make your Prints a little too big or too small. This varies from Filament to Filament and from Printer to Printer.

Try to always print everything in one Filament to avoid this issue.