



# Mechanical calculator "Pascaline" (modular design)

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## Summary

This is a remix of the José Campos project, Mechanical calculator (modular design).

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This is a remix of the José Campos project, Mechanical calculator (modular design).

I made some cosmetic changes, and I completely replaced some gears, added springs, to improve the functioning. Pay attention to the alignment of the parts.

Reported below the explanation from his project:

This is a design based on the famous "Pascaline", which was invented by Pascal in 1642.

[https://en.wikipedia.org/wiki/Pascal%27s\\_calculator](https://en.wikipedia.org/wiki/Pascal%27s_calculator)

Here you will find a detailed explanation as to how it works:

The design was simplified and adapted to FDM. One main adaptation is the modular design. With it you may build modules to increase the size of your calculator and thus enable larger operations. As the mechanism is asymmetrical, in order to perform the "carry operation", the modules need to be build in a A-B-A-B... fashion.

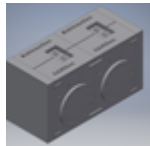
## Print instructions

Require supports only for "Asymmetric\_B".

Some parts may require glue.

Sand the pins so that they fit in without too much effort, but are not loose.

## This remix is based on



### Mechanical calculator (modular design)

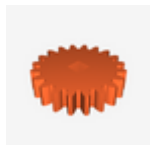
by José Campos

## Model files



direction\_lock.stl

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20\_teeth.stl

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cover.stl

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hinge.stl

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**box.stl**

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**pin\_43.stl**

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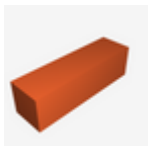
**pin\_20.stl**

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**box\_numbers.stl**

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**pin\_15.stl**

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**selector.stl**

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**left\_side.stl**

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**thickness\_for\_20\_teeth.stl**

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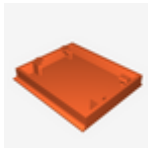
**porthole.stl**

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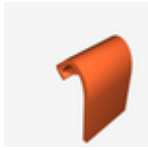
**spring\_for\_asymmetric\_a.stl**

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**right\_side.stl**

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**spring\_for\_asymmetric\_b.stl**

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**stop.stl**

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**numbers.stl**

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**asymmetric\_a.stl**

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**asymmetric\_b.stl**

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**gear\_ii.stl**

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**direction\_lock\_gear.stl**

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**gear\_i.stl**

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