

BLENDER

3D-MODELING

CHESS PAWN



JACEK KAWAŁEK

CHESS PAWN

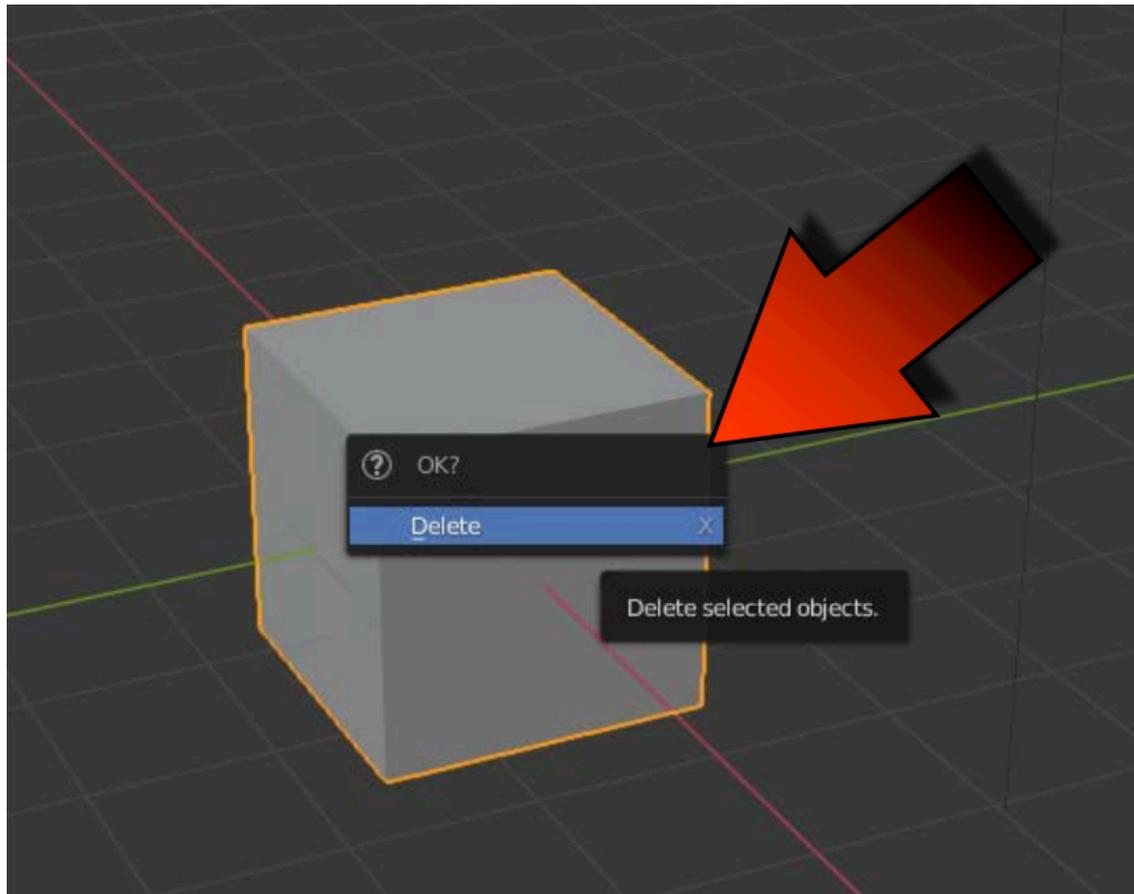
REMEMBER

**Save your work
systematically,
as you often need
to come back
to earlier solutions.**



CHESS PAWN

**We delete the default object
with the **X** or **DEL** key**

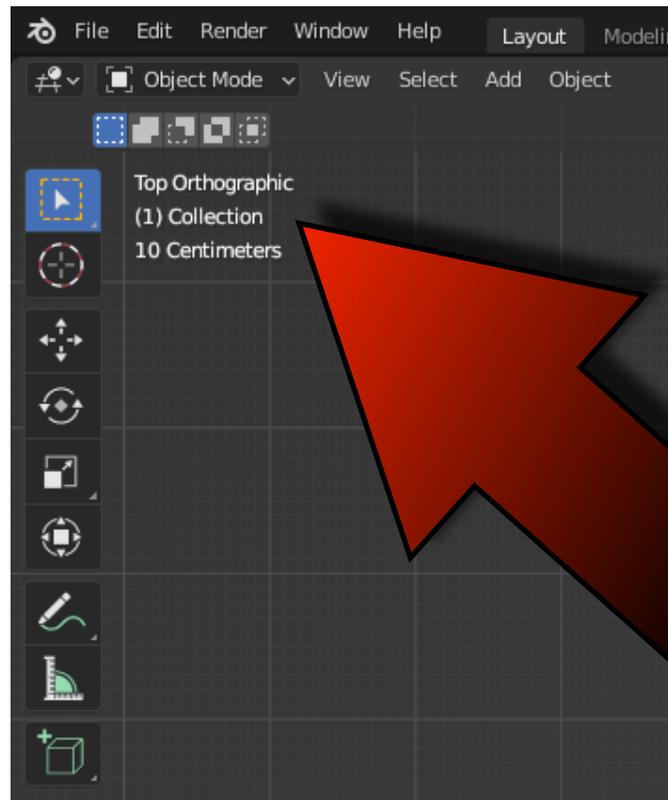


CHESS PAWN

In Object Mode

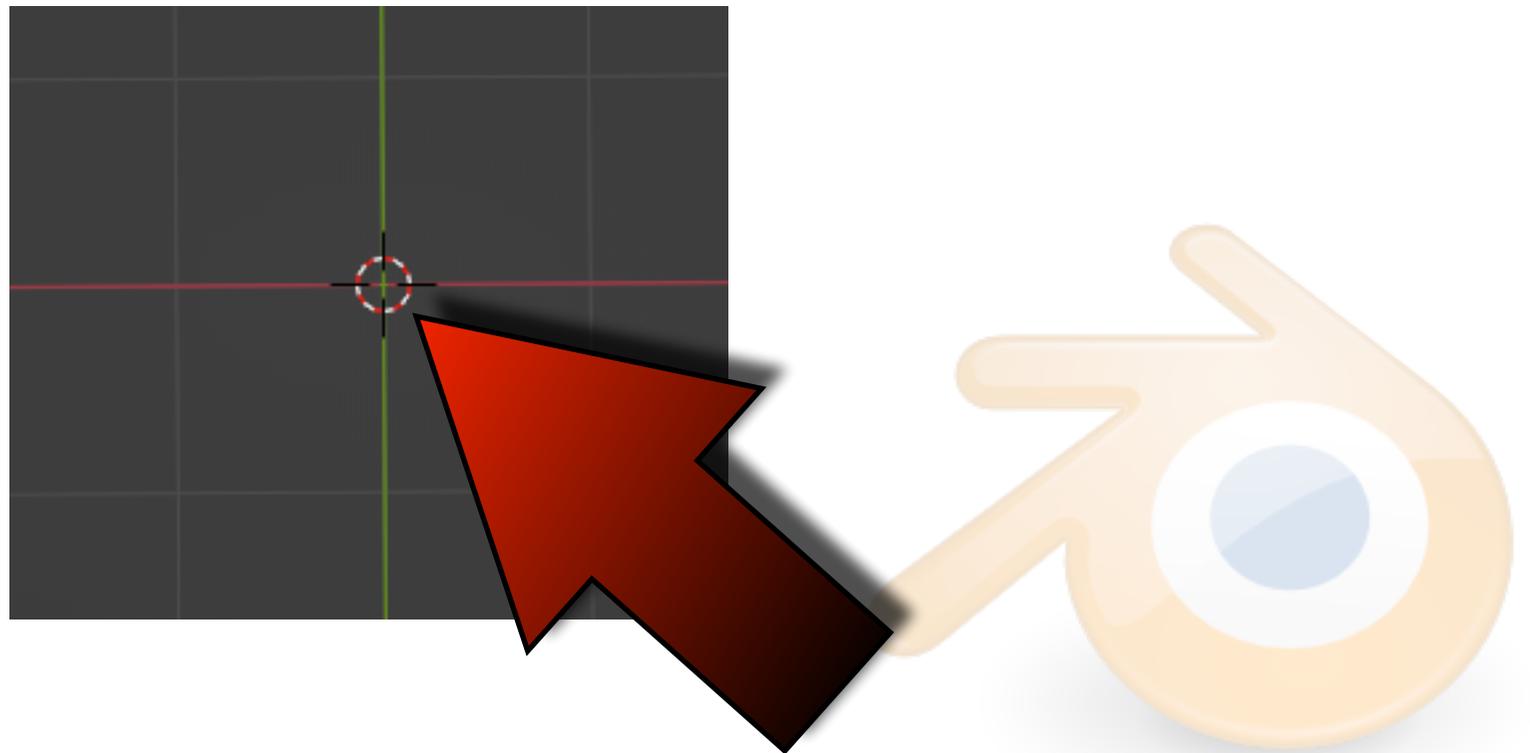
click Numpad - 7

TOP ORTHOGRAPHIC



CHESS PAWN

**Place the 3D cursor in
the center of the system
by pressing **SHIFT + C****

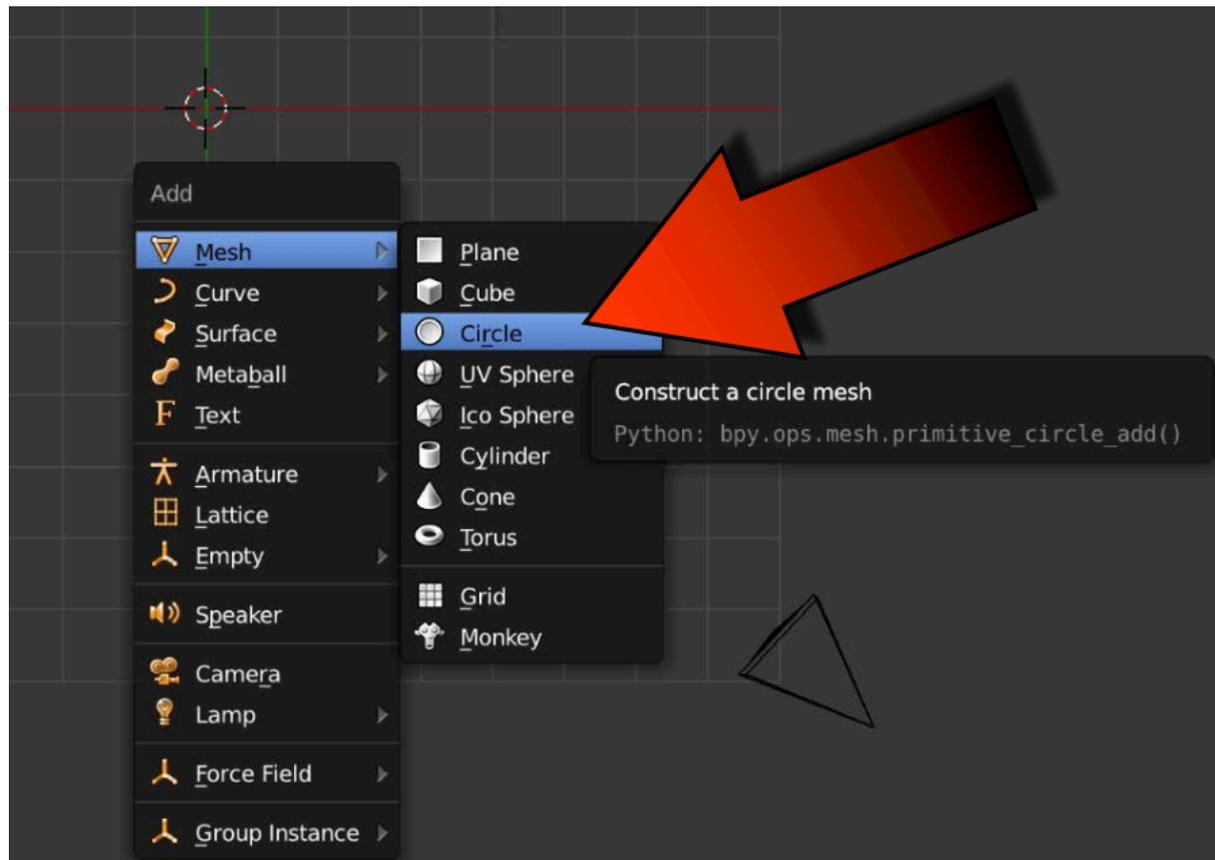


CHESS PAWN

WE ADD A CIRCLE

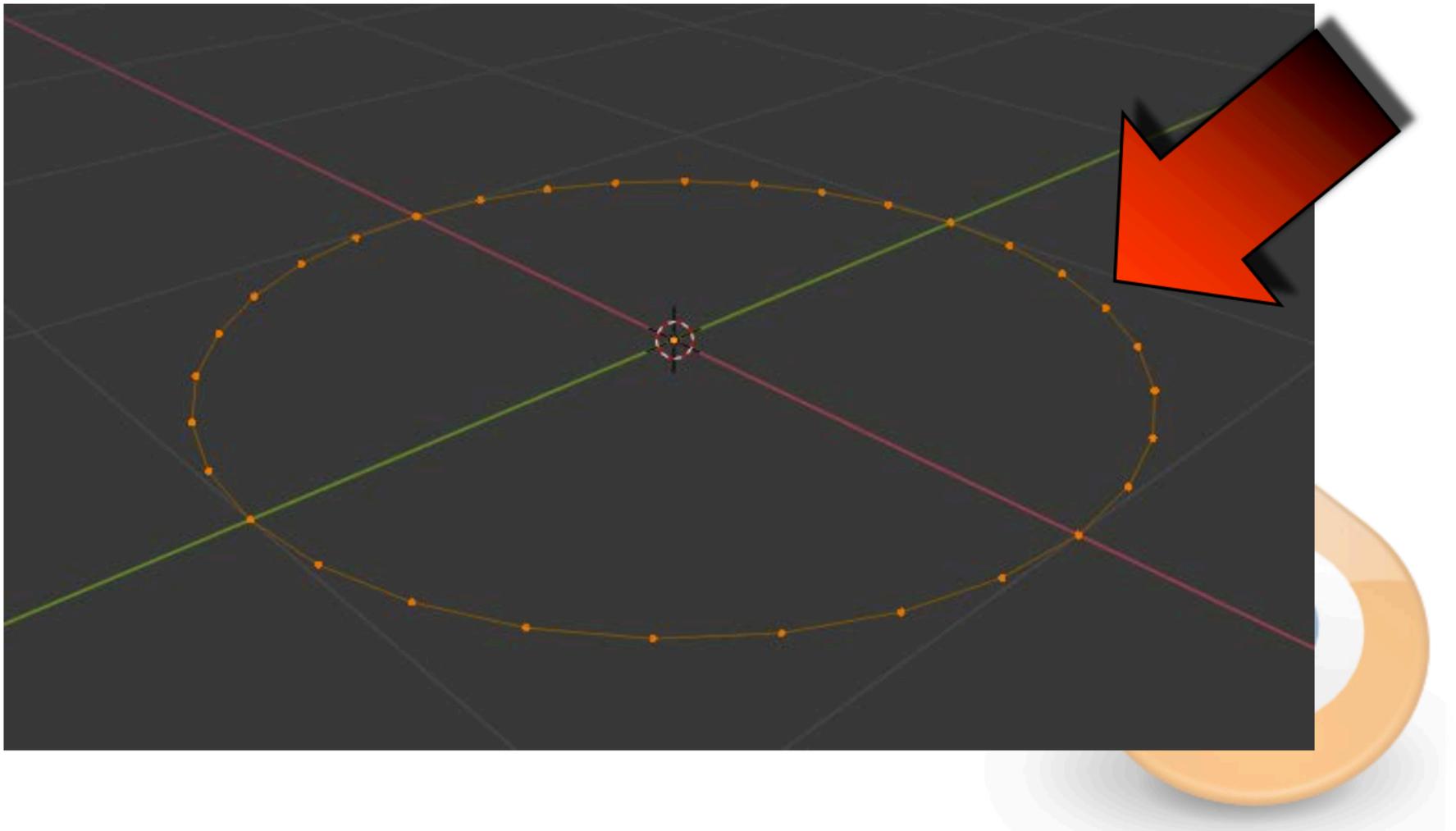
Press **SHIFT + A**

and choose **MESH / CIRCLE**



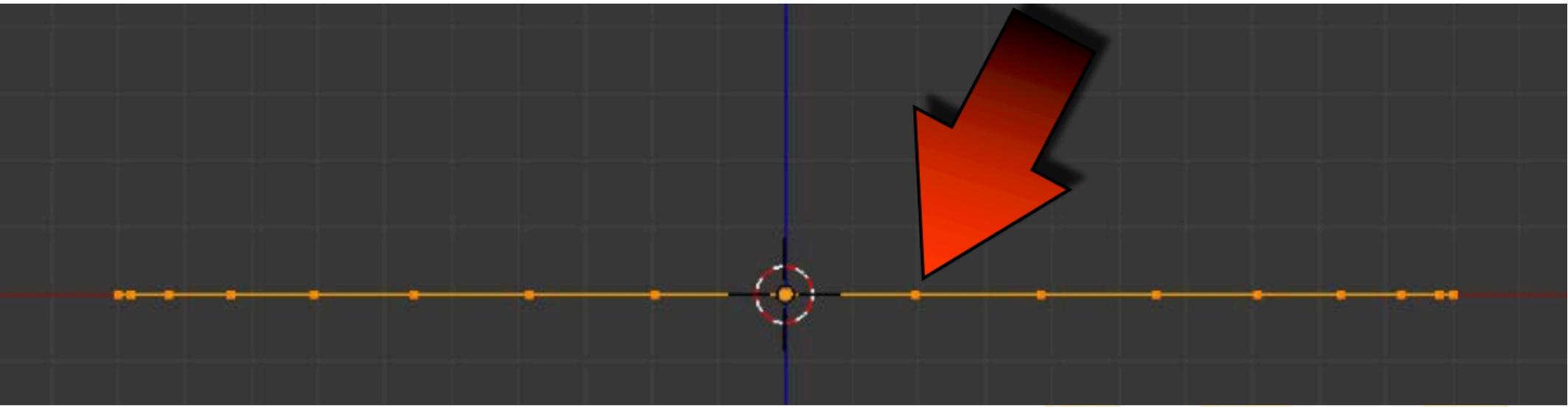
CHESS PAWN

We change to **Edit Mode**
by pressing the **TAB** key



CHESS PAWN

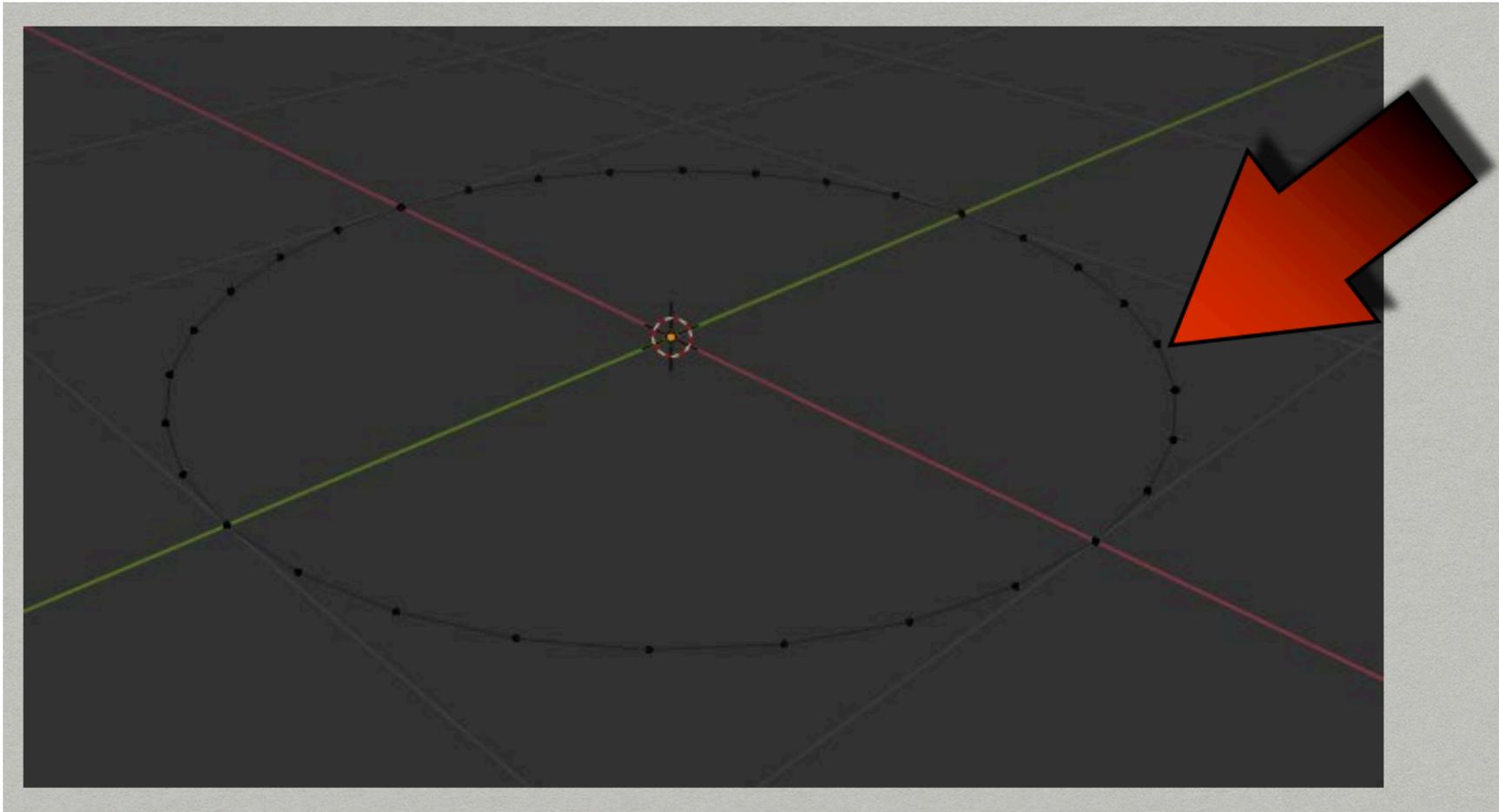
**We select all the vertex
with the A key**
(orange color means selection)



CHESS PAWN

Deselecting vertex

ALT + A



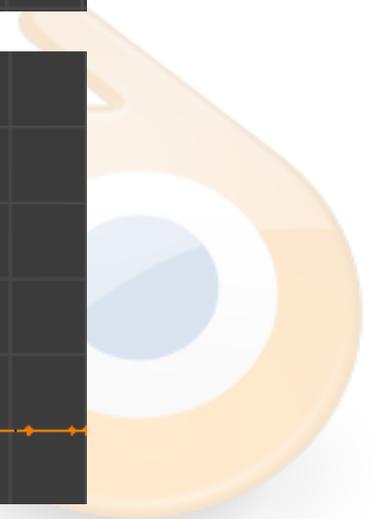
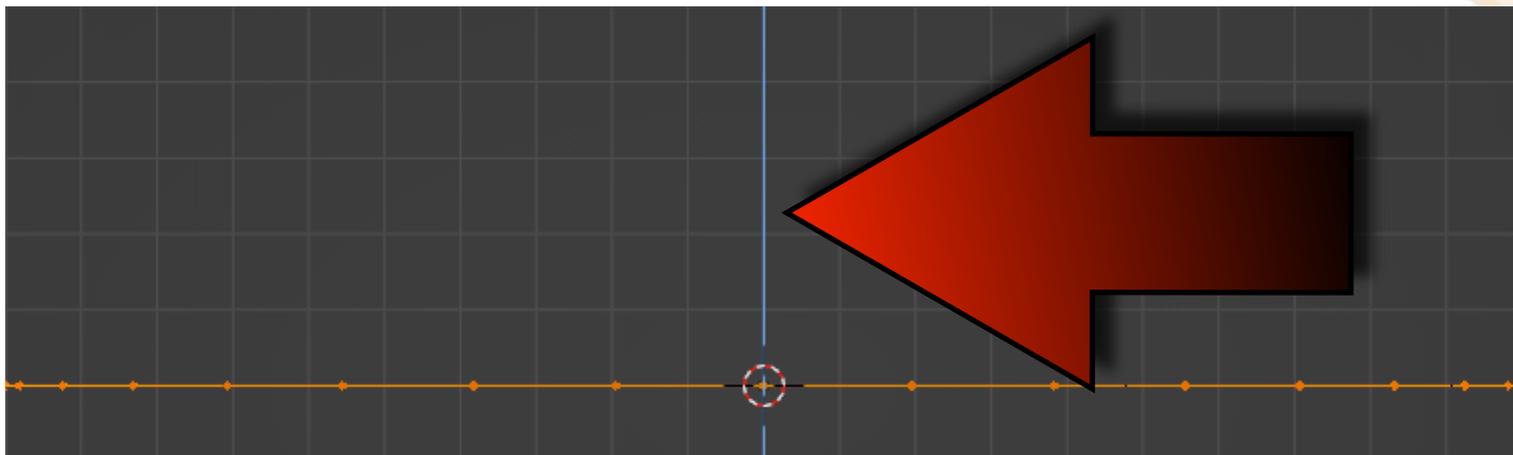
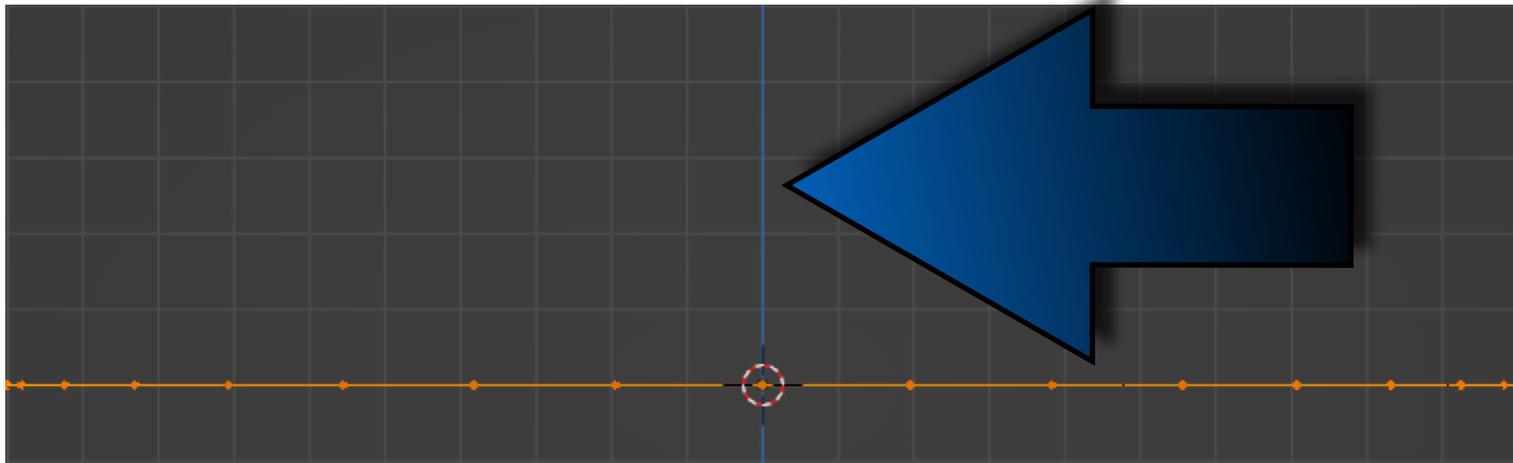
CHESS PAWN

**If something fails
each operation
can be undone
using **CTRL + Z****



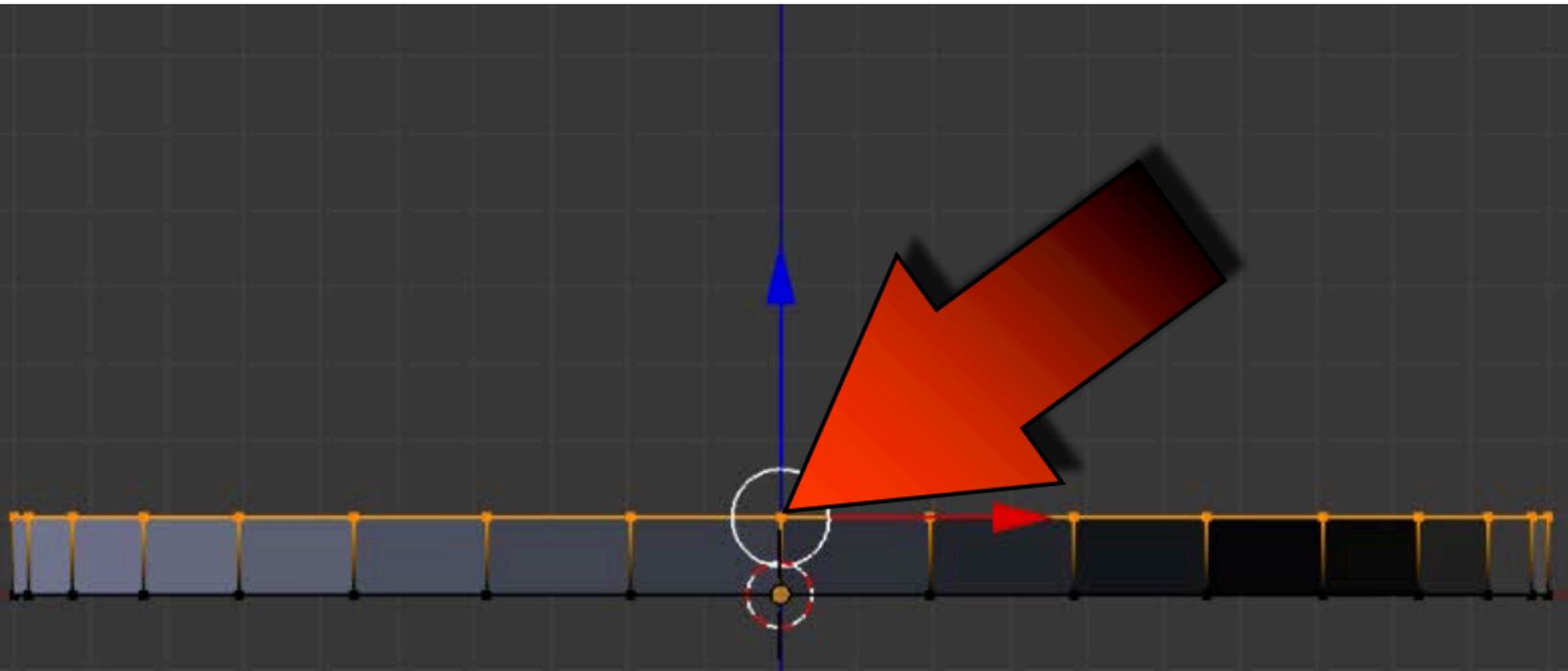
CHESS PAWN

Press the **E Key** and then the **Z Key**
(the Z axis will become brighter)



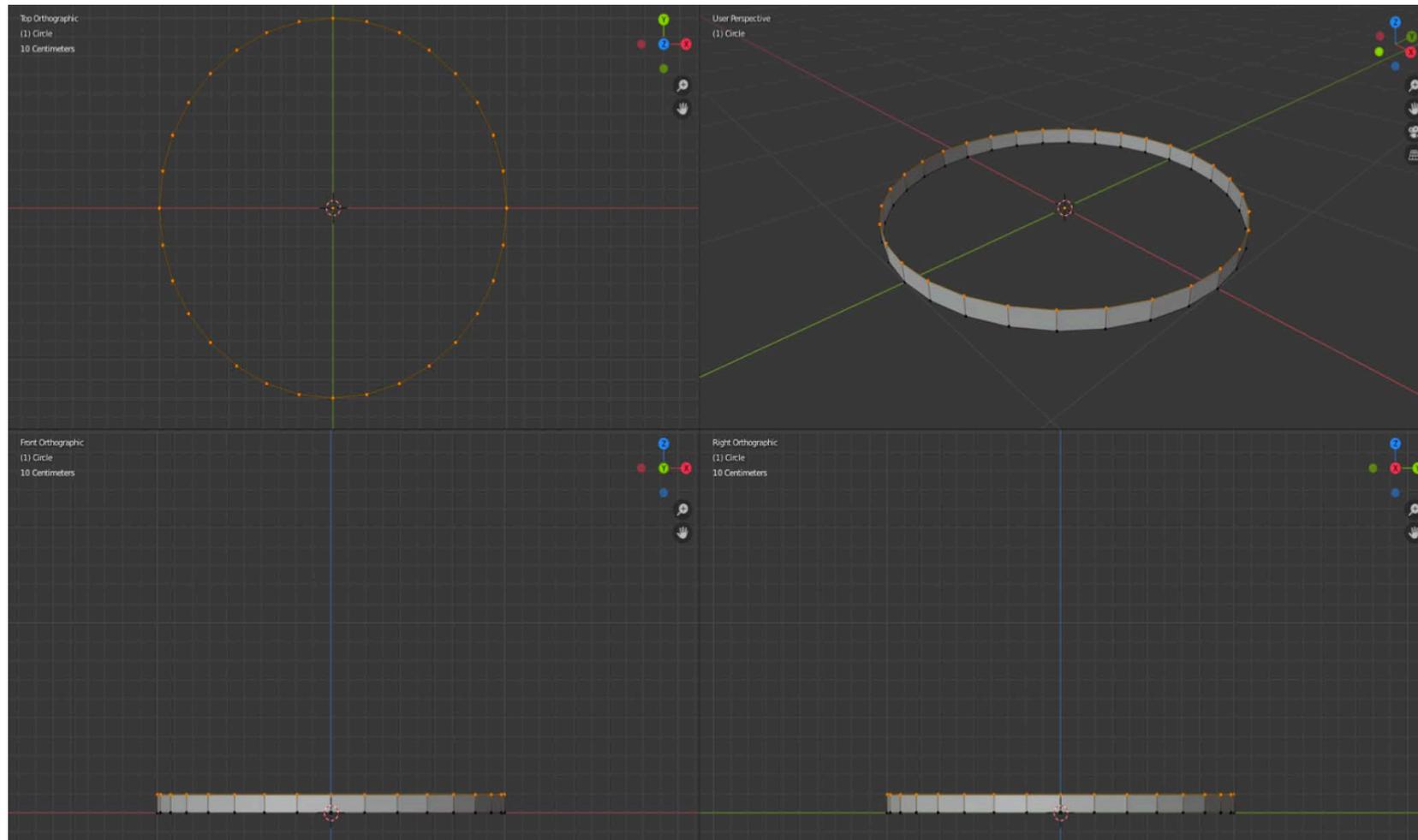
CHESS PAWN

Then you
move the mouse up



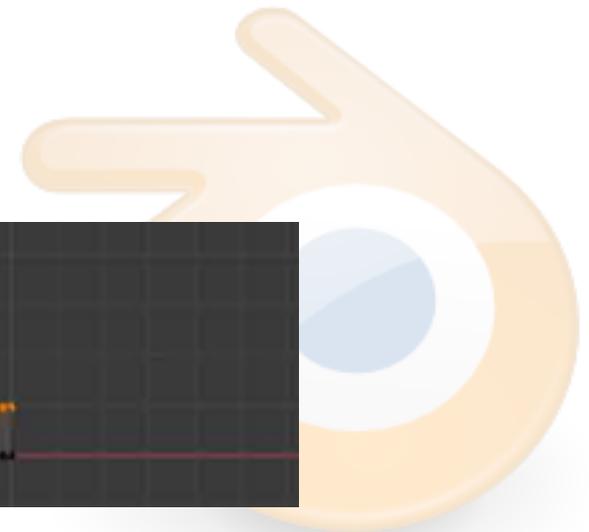
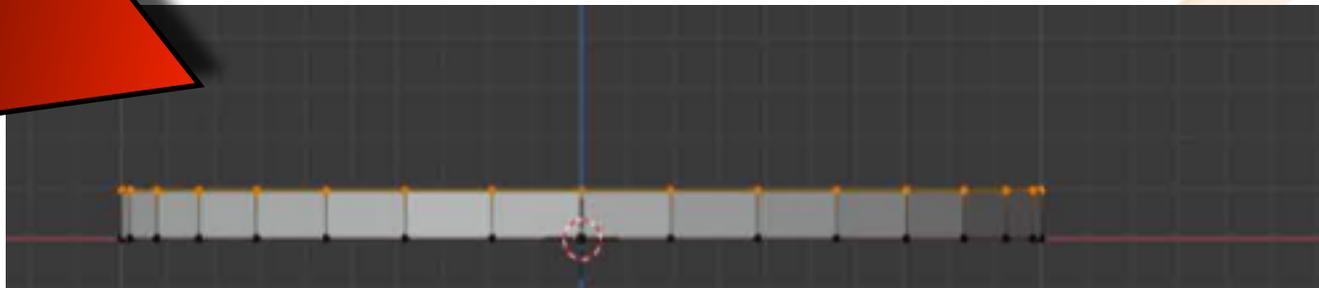
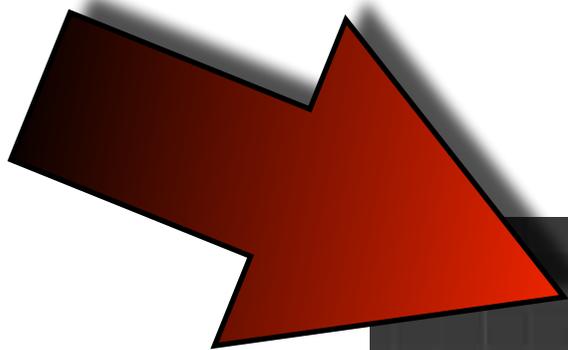
CHESS PAWN

CLICKING WITH YOUR MOUSE CONFIRMS YOUR CHOICE



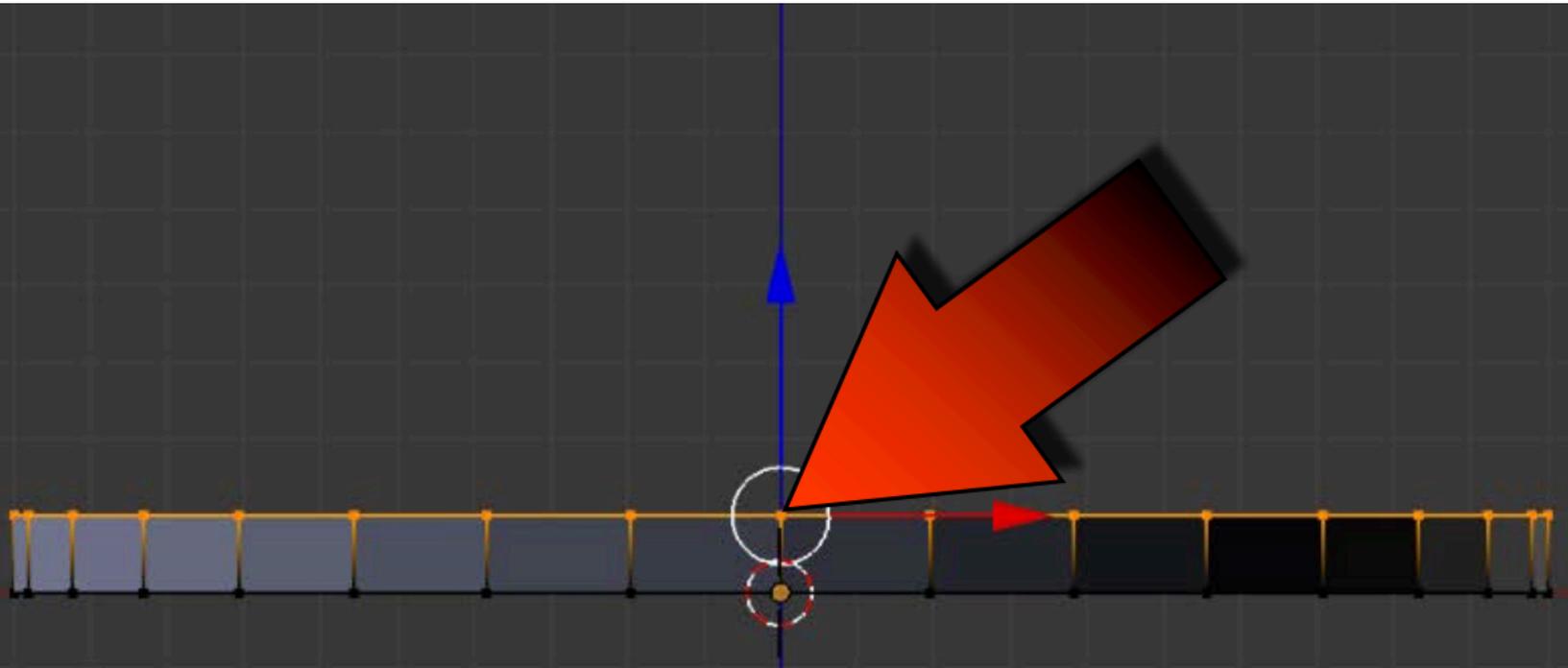
CHESS PAWN

If we want the object to be created exactly like the mesh we see in the background, we hold down the CTRL key while moving it.



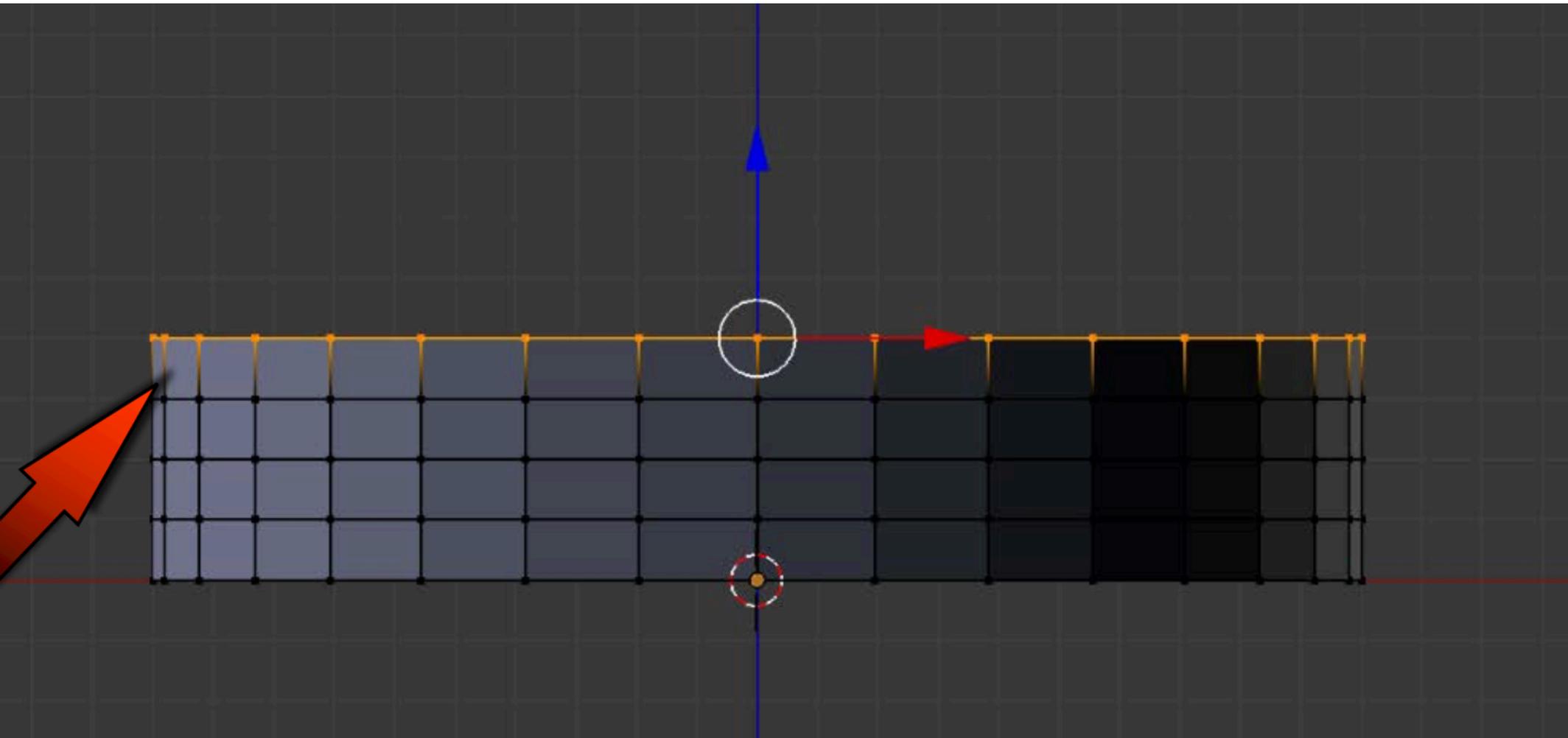
CHESS PAWN

To set **very precisely** we can
use the **SHIFT** key.



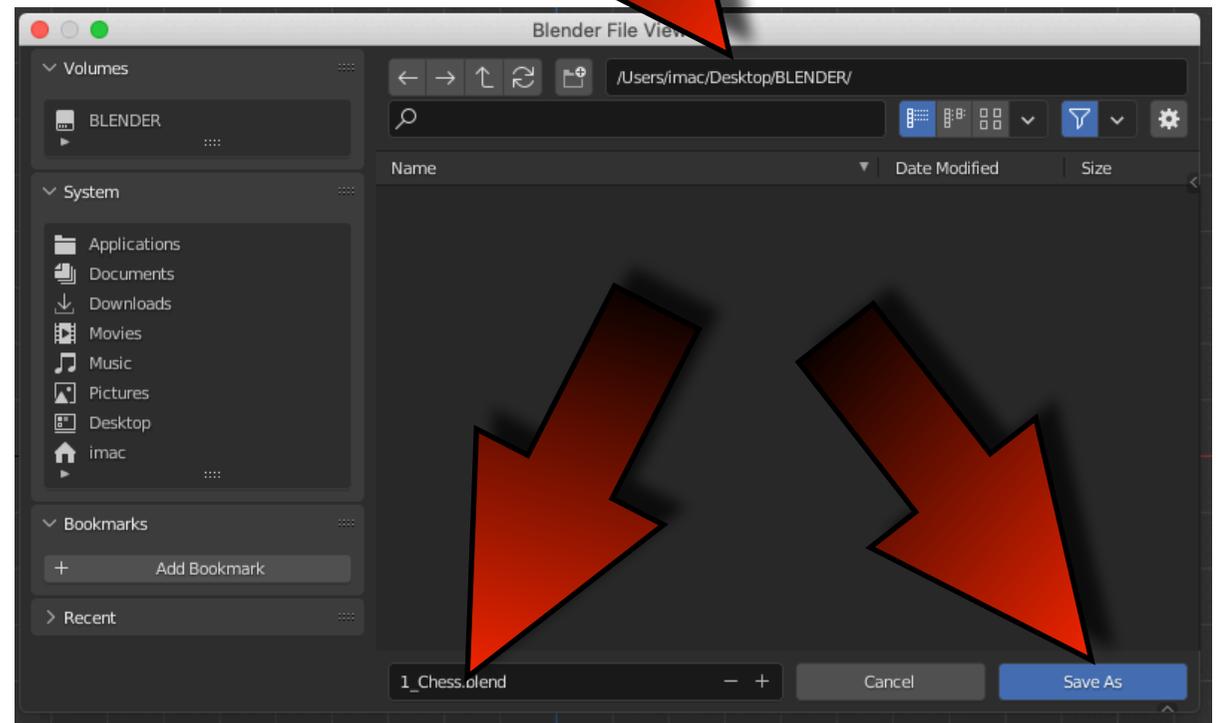
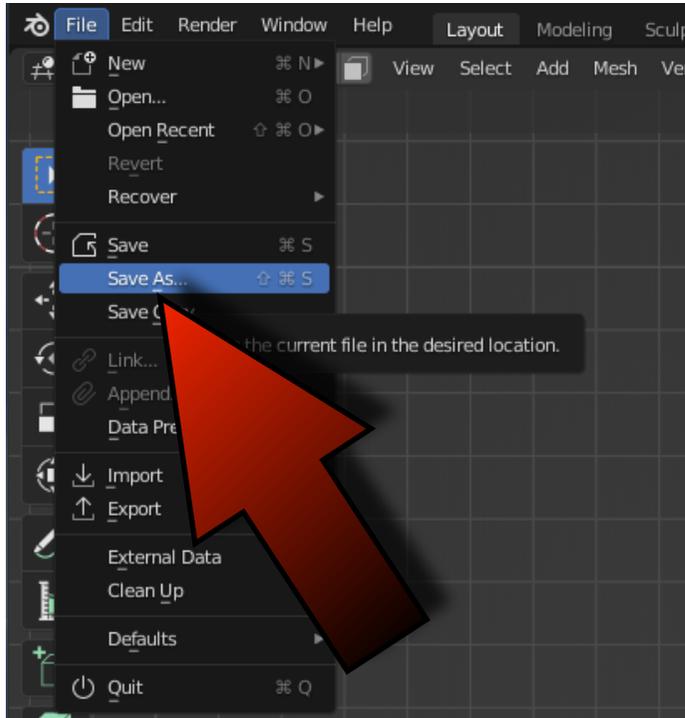
CHESS PAWN

**We repeat the last step
3 times.**



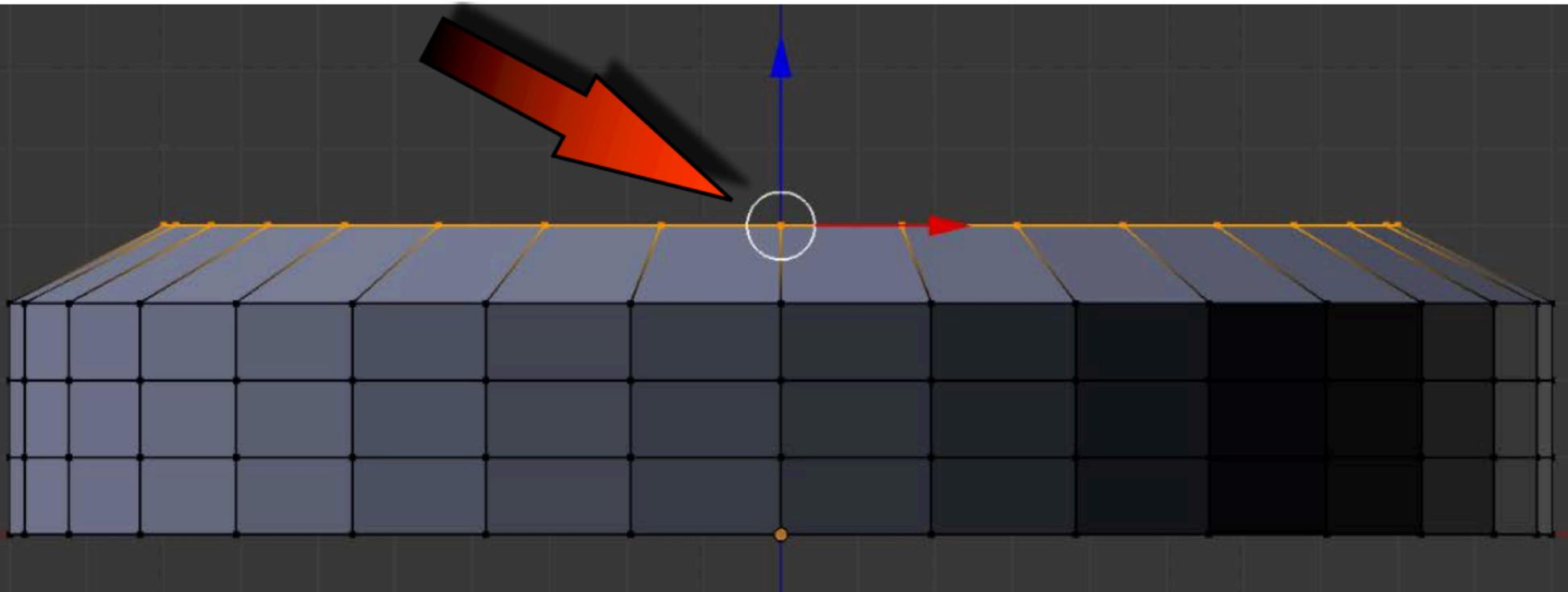
CHESS PAWN

Save file as **1_Chess.blend**



CHESS PAWN

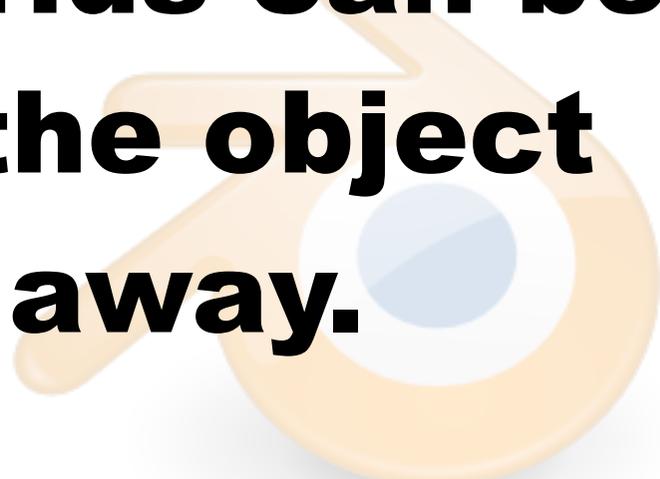
Press **S** key and move the mouse
to the center of the object.



CHESS PAWN

The **extruding with the **CTRL key** will take place what grilles that are visible.**

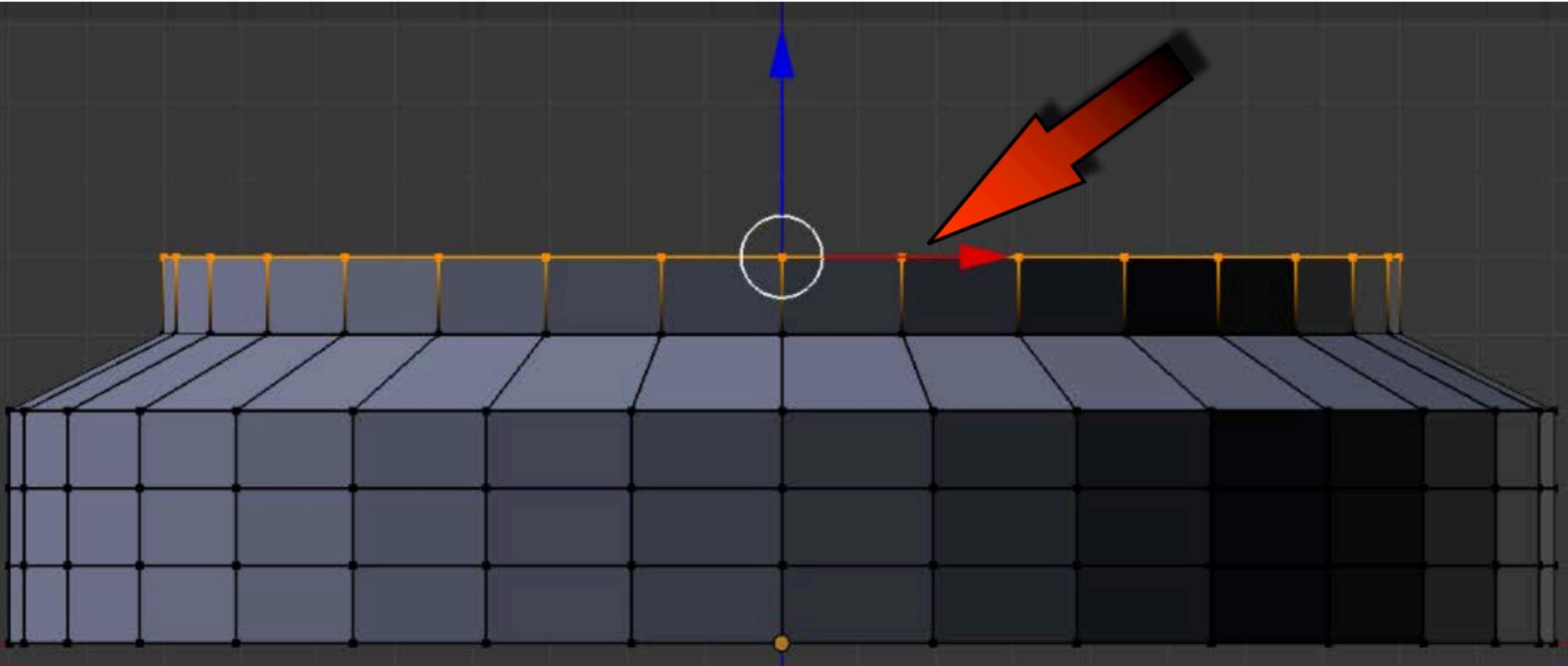
The visibility of the grids can be changed by moving the object closer or further away.



CHESS PAWN

Press **E** then **Z**.

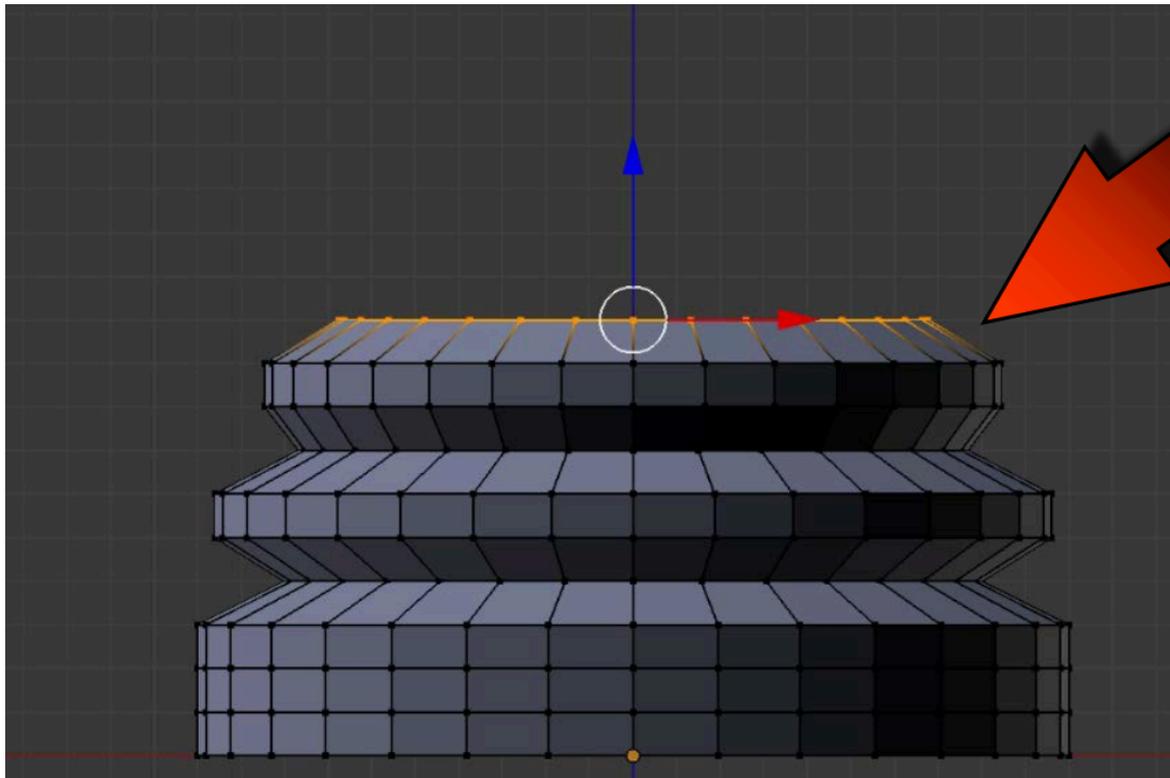
Then while **holding CTRL**
move the mouse one square up.



CHESS PAWN

Press the **S key** and move the mouse from the center.

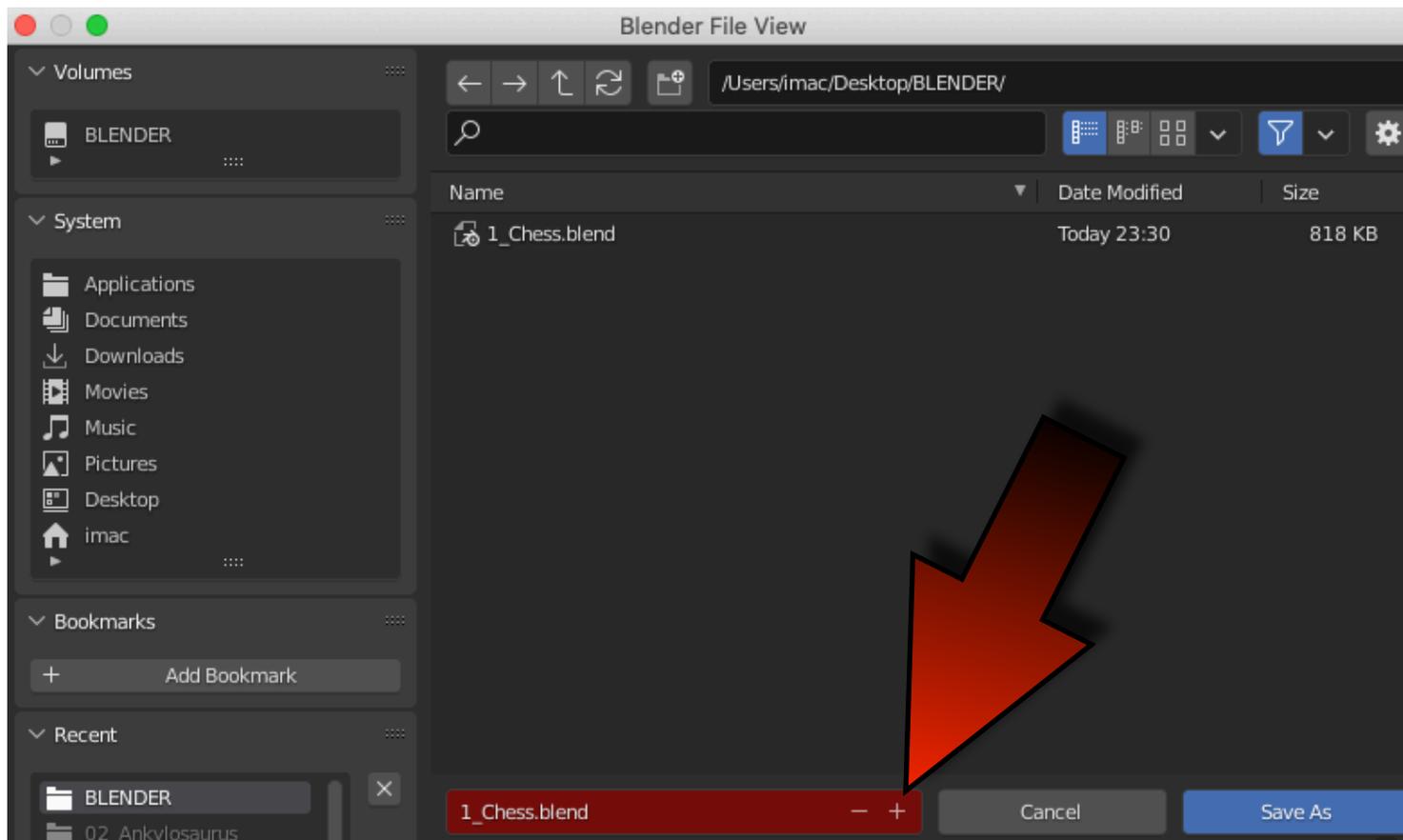
Repeat it again to get this effect.



CHESS PAWN

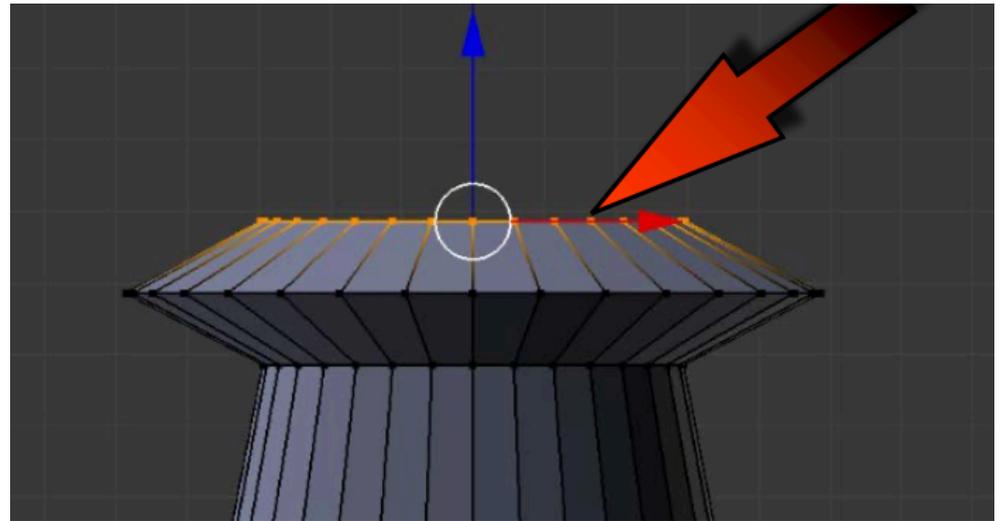
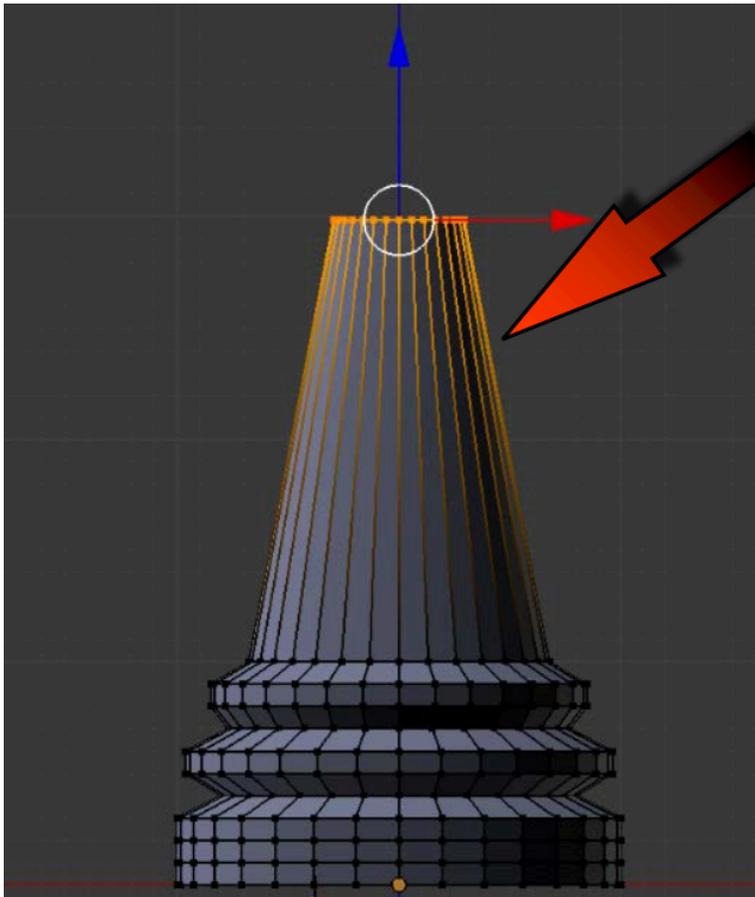
Save file as **2_Chess.blend**

Use **+** to rename



CHESS PAWN

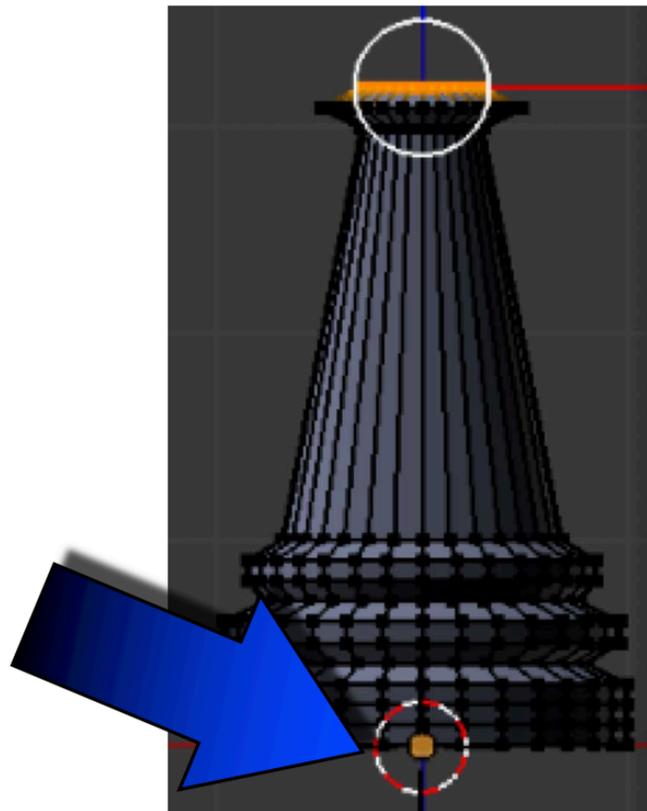
**We create the leg in the same way,
only changing the proportions.**



CHESS PAWN

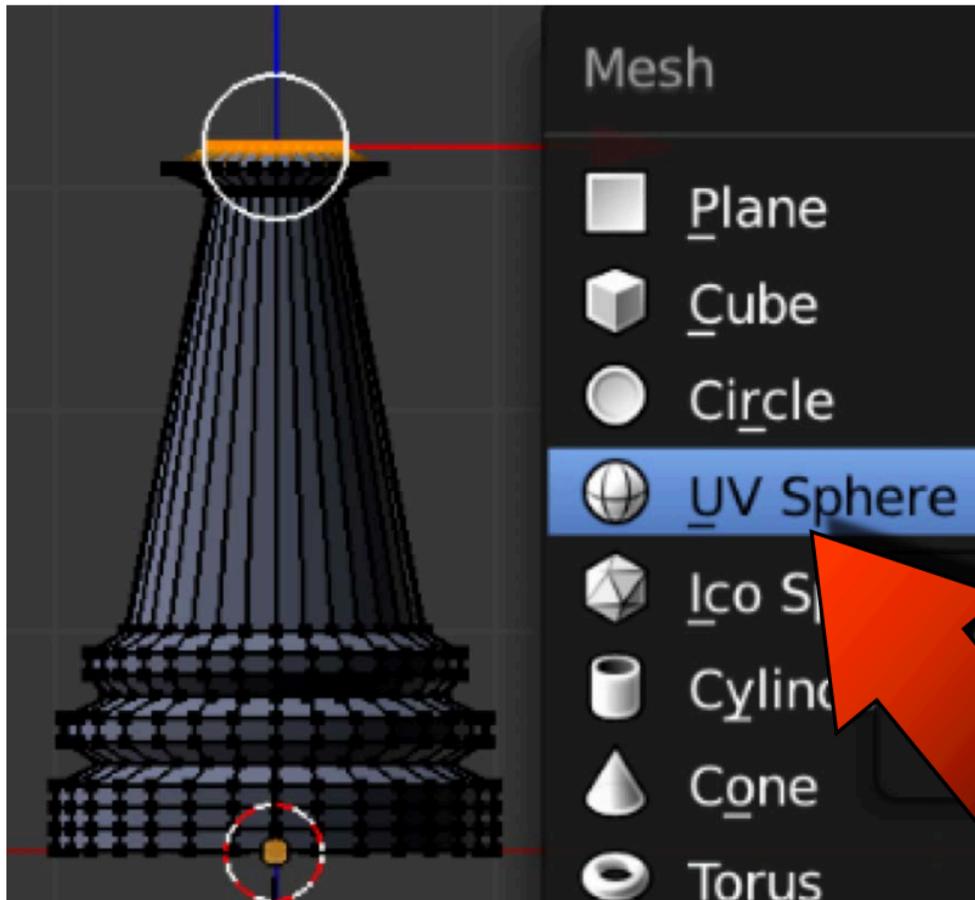
Press **SHIFT + C**

(the **3D cursor** will move to the center of the coordinate system)



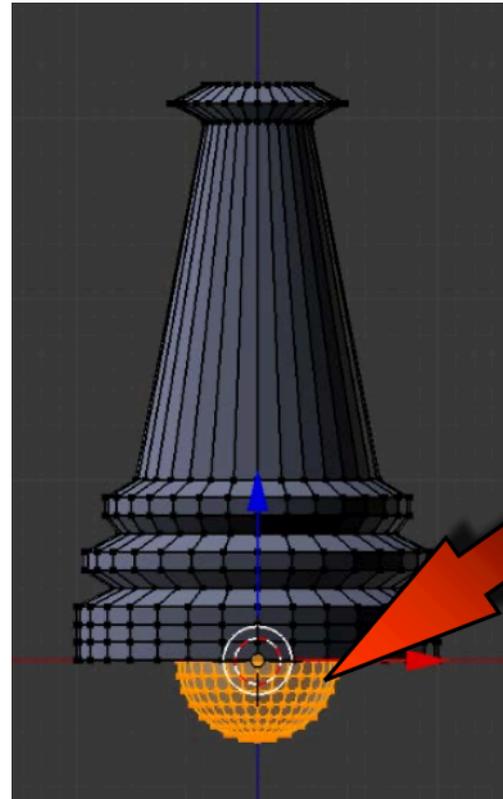
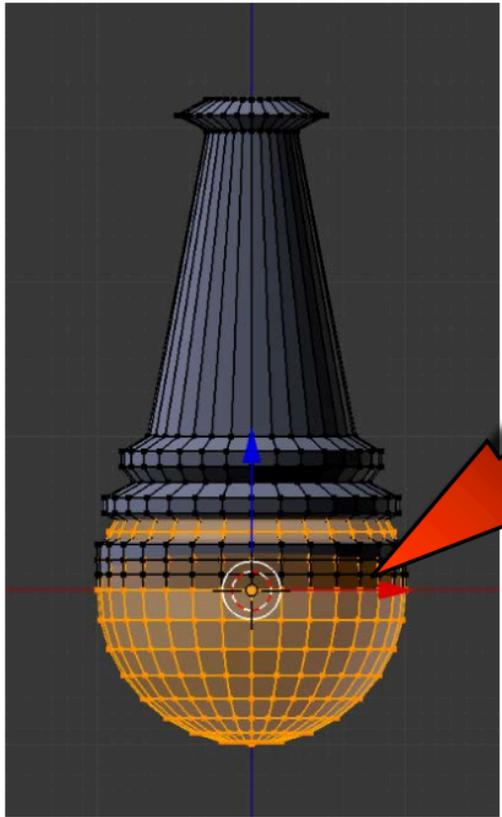
CHESS PAWN

Click on **SHIFT + A**
and add **UV Sphere**



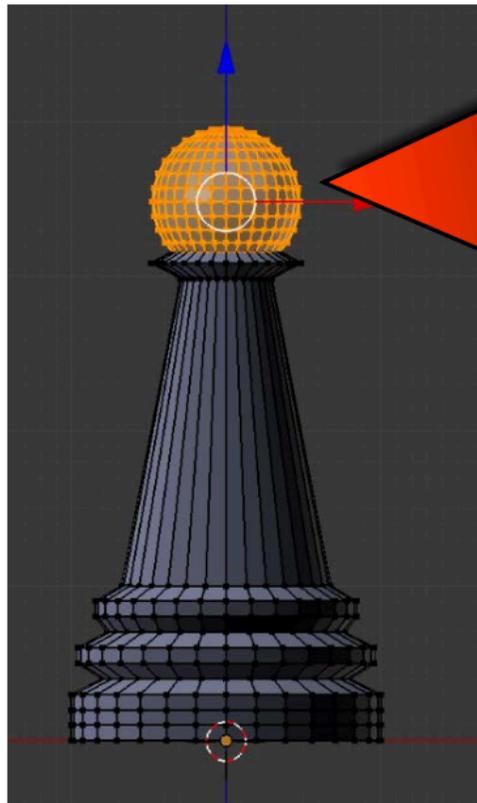
CHESS PAWN

The ball is **too large** and must be reduced with the **S** key.



CHESS PAWN

Click **G (grab) and then Z (axis selection) and the mouse we move the ball up.**

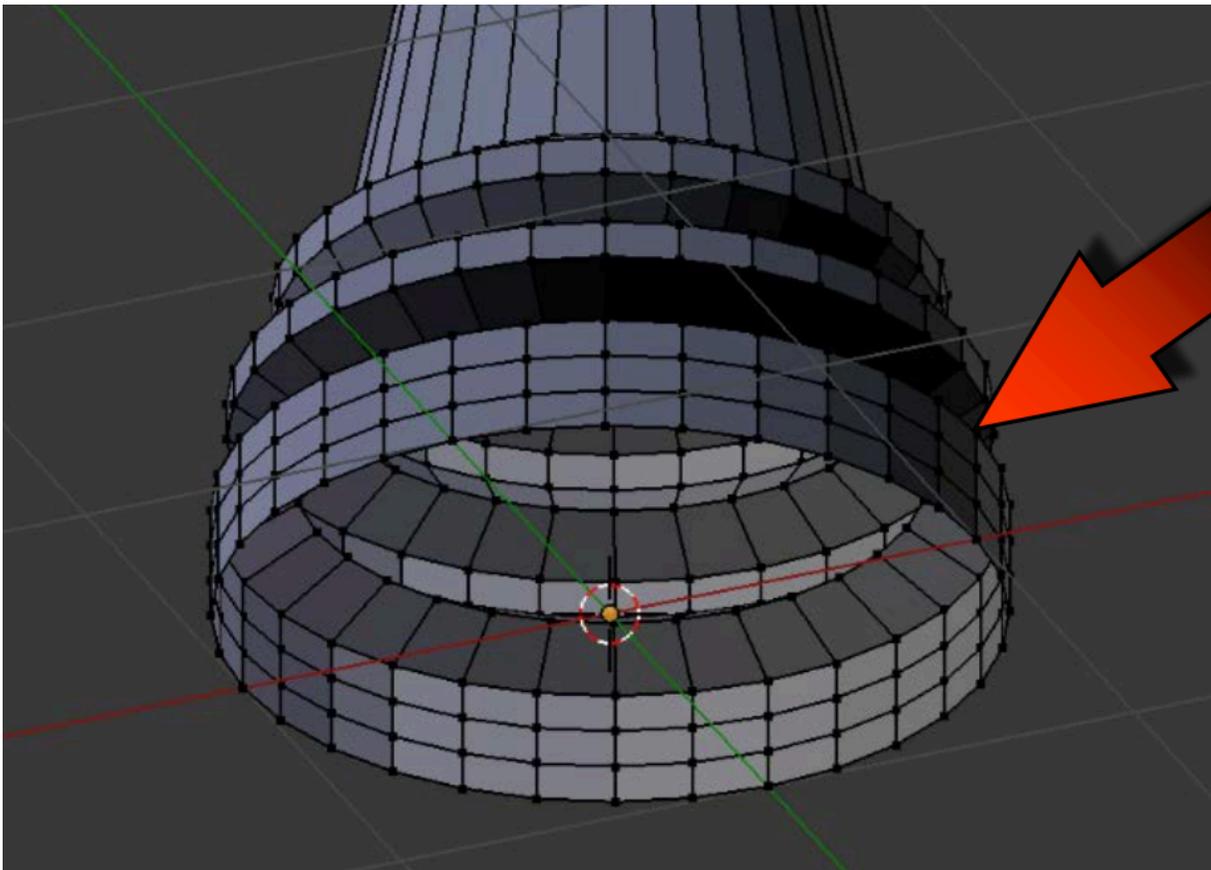


Save file as
3_Chess.blend



CHESS PAWN

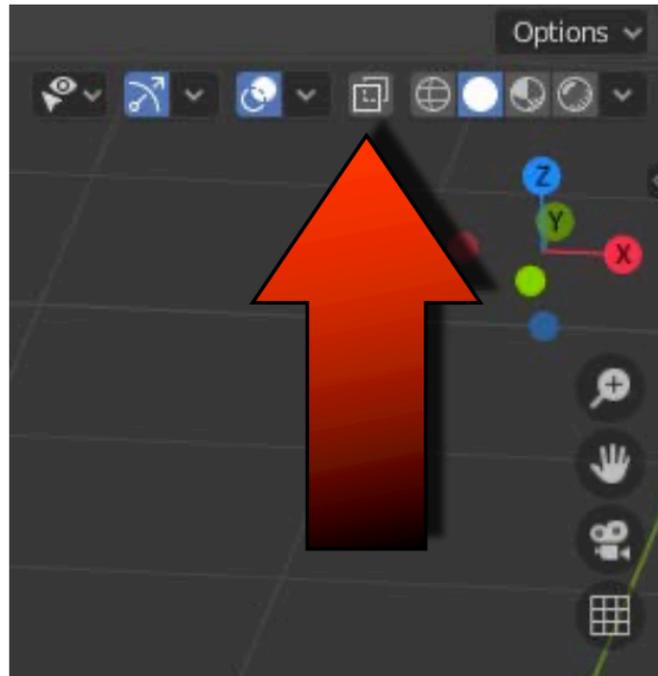
**The pawn at the bottom
is not locked.**



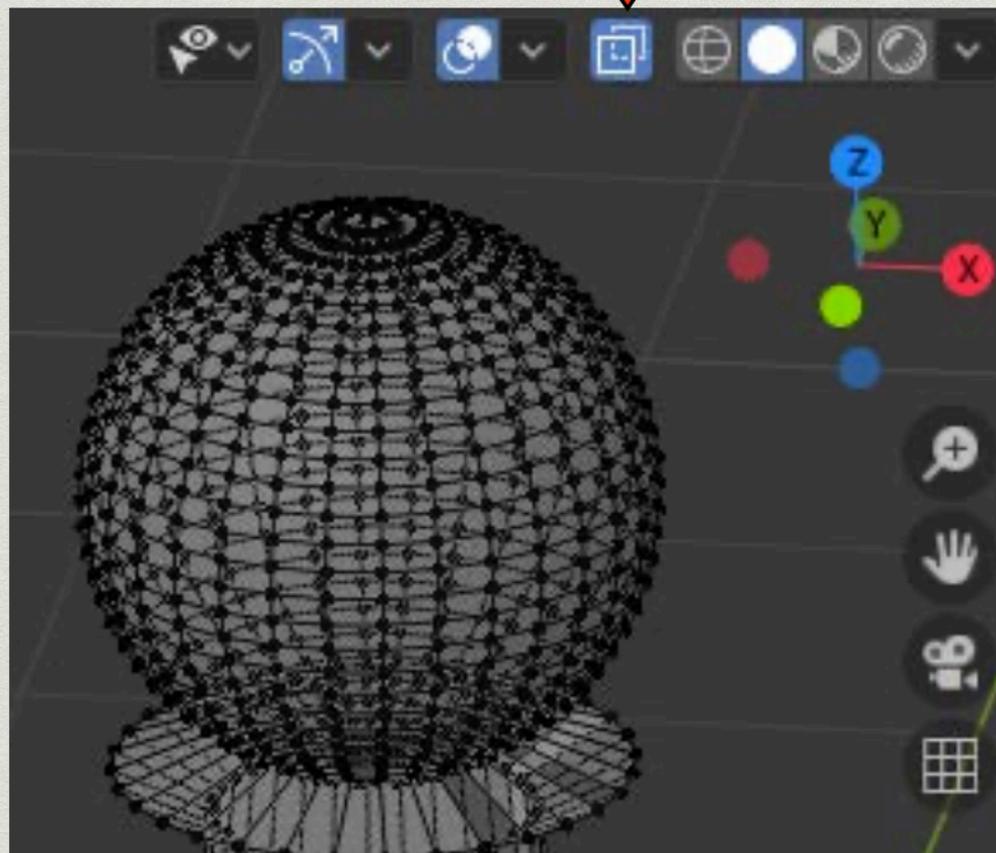
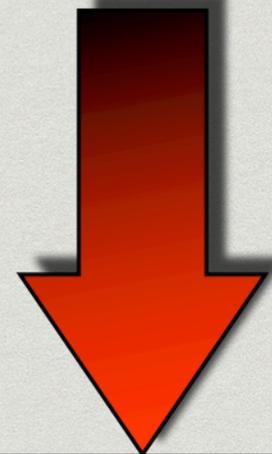
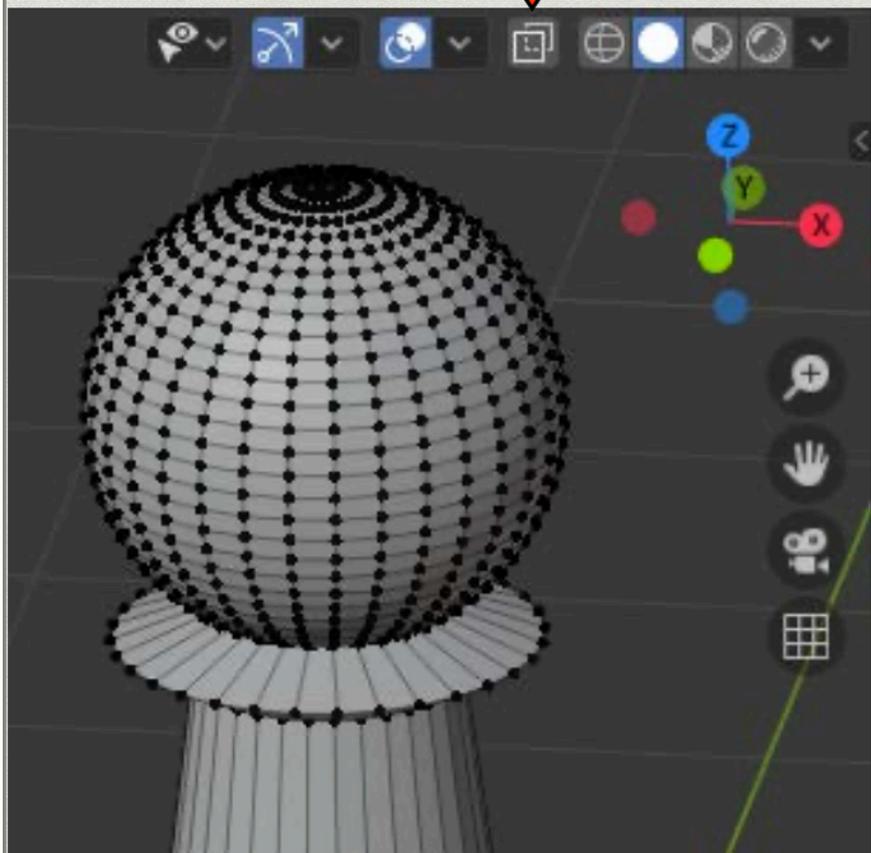
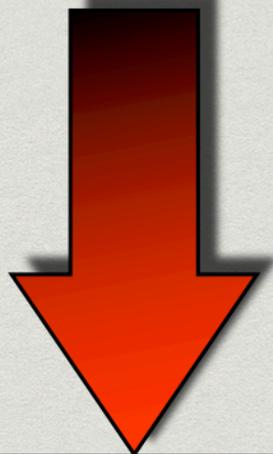
CHESS PAWN

To select the edges on the front and back of the object, we must mark their visibility.

Click on the button that will turn it on all edges visible.

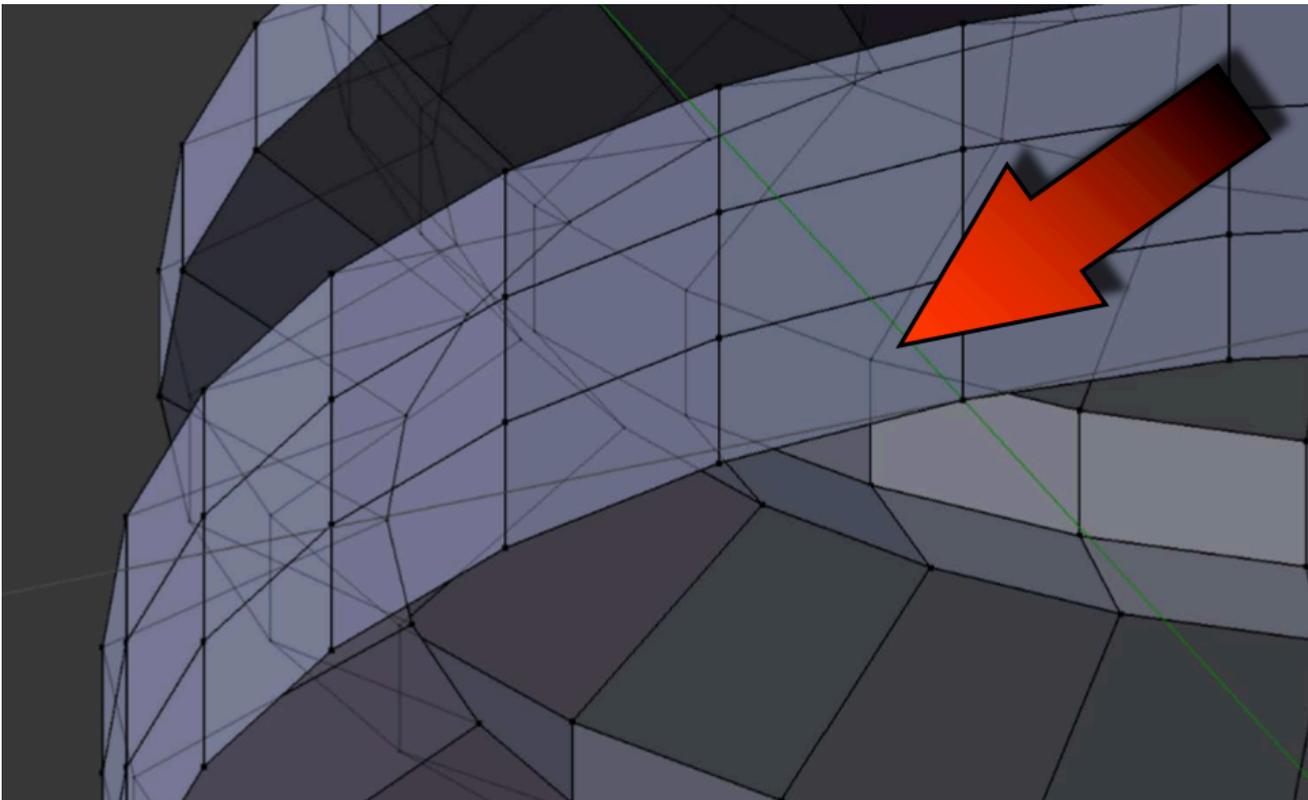


CHESS PAWN



CHESS PAWN

**After turning it on, we will clearly
see all of them
edges on the front and back.**



CHESS PAWN

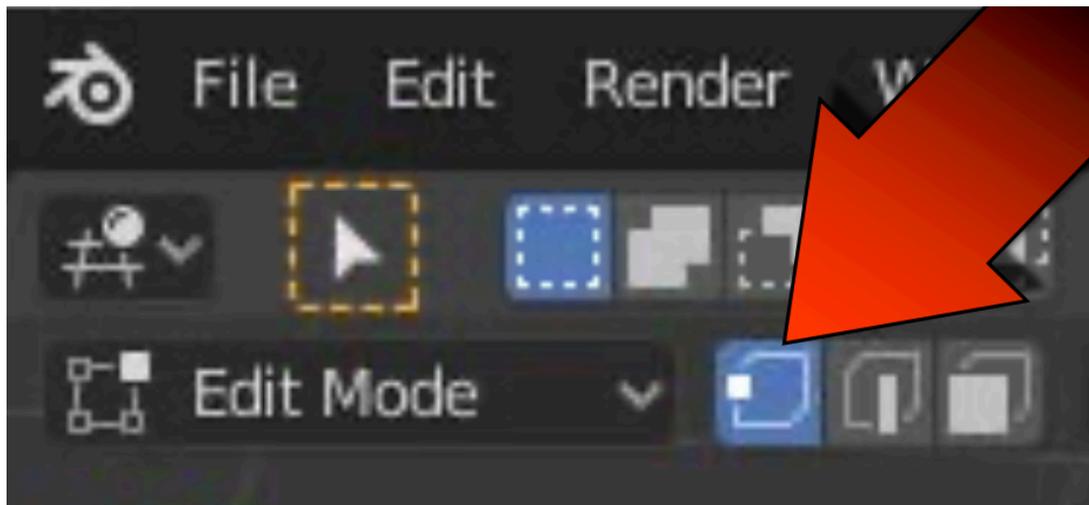
Click **Numpad 1** (FRONT ORTO).

Next a button to select

only the vertex

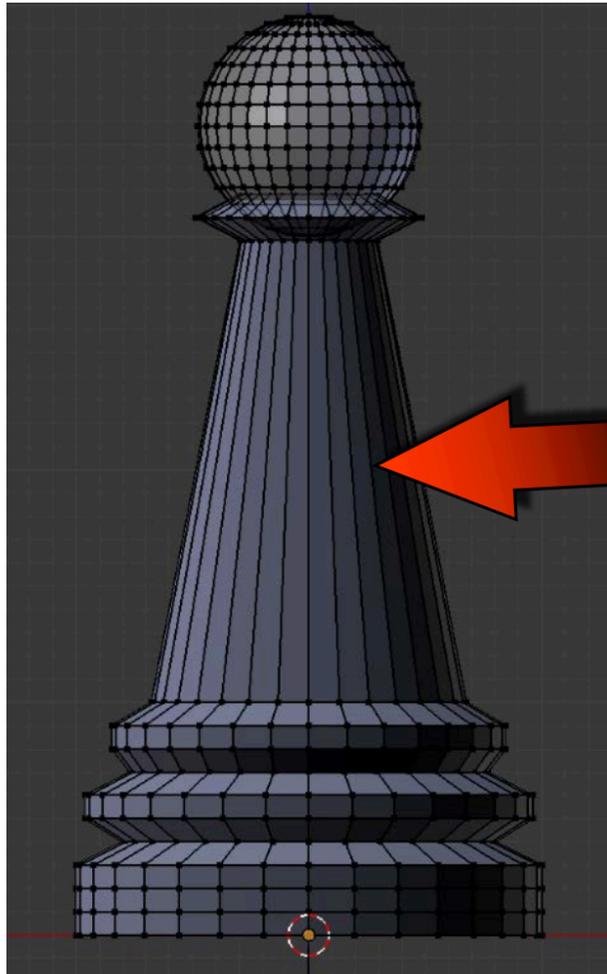
or 1 Key

FROM LARGE KEYBOARD



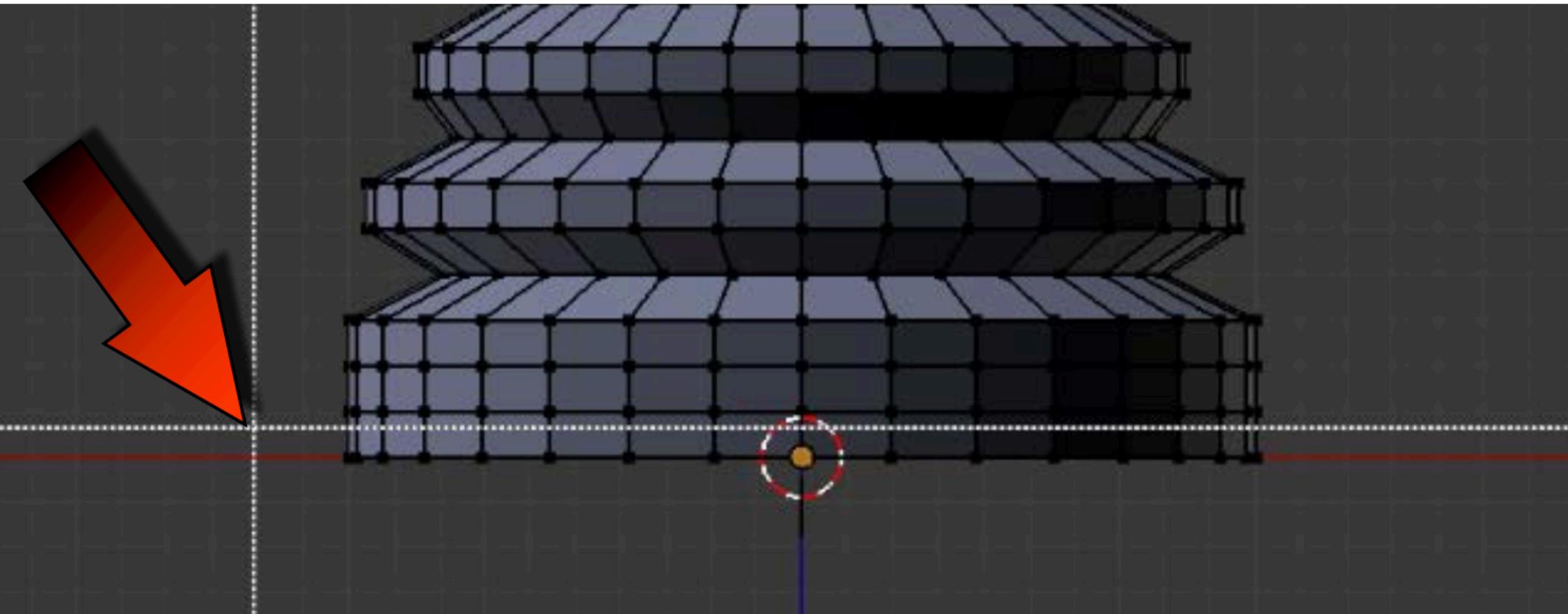
CHESS PAWN

Press **ALT + A** to turn off
all selected items



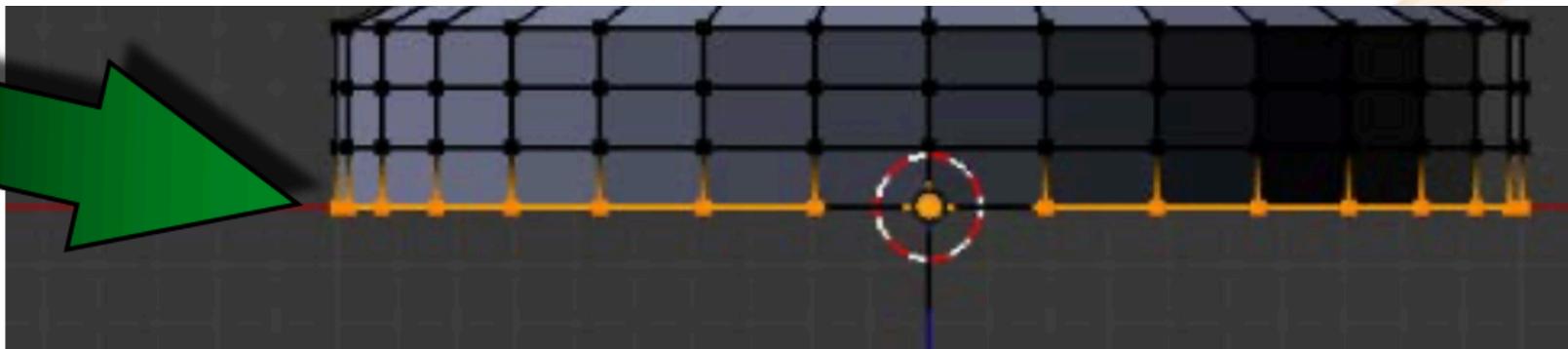
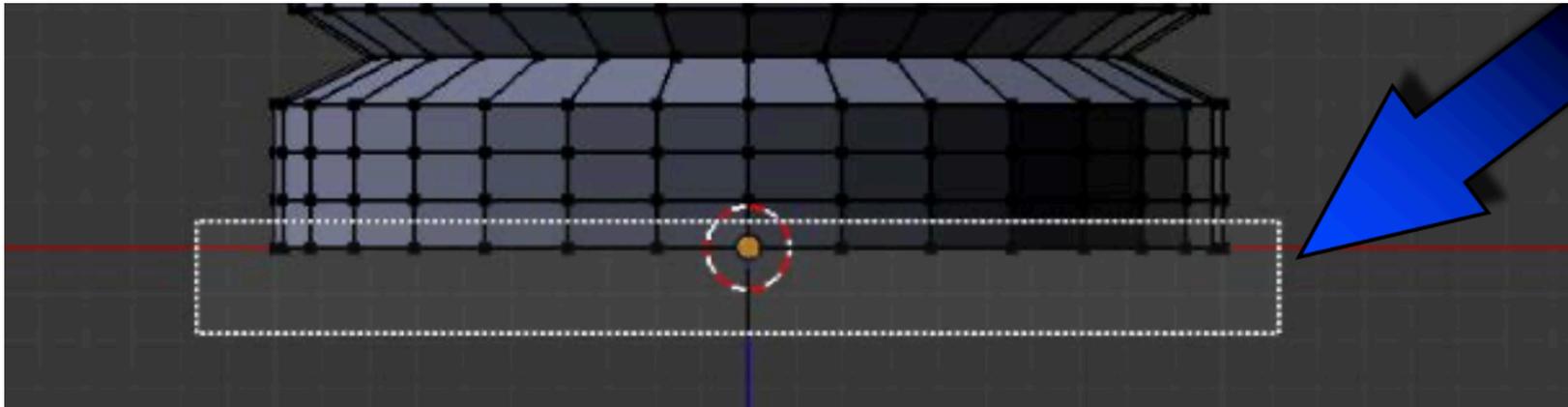
CHES PAWN

Click on the **B Key**
and place the mouse
in the right place



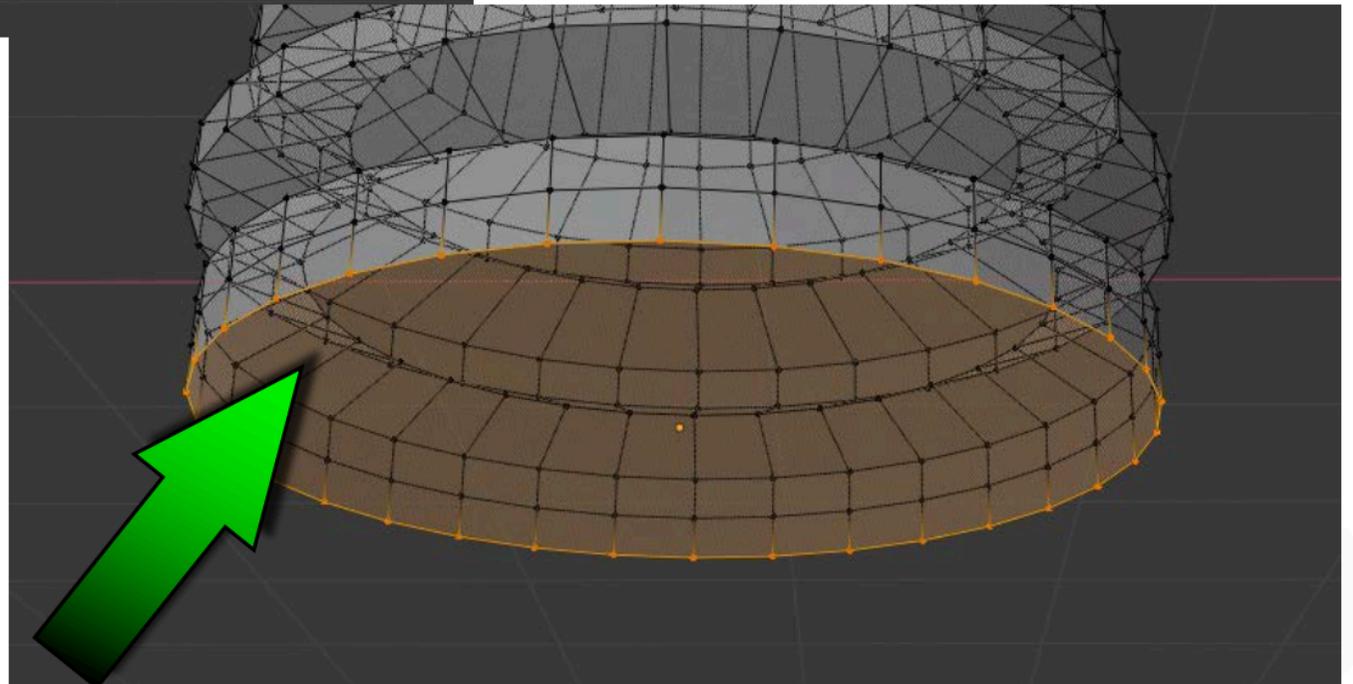
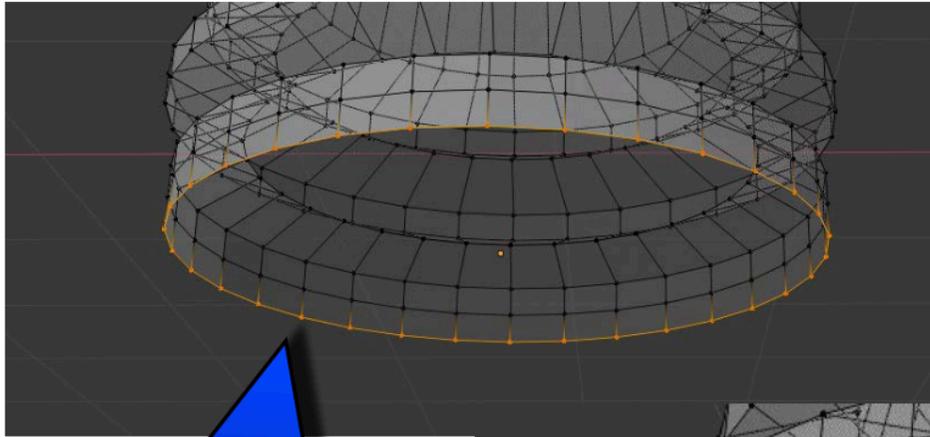
CHESS PAWN

Then we only mark
lower vertex of the pawn
(orange color means **selection**)



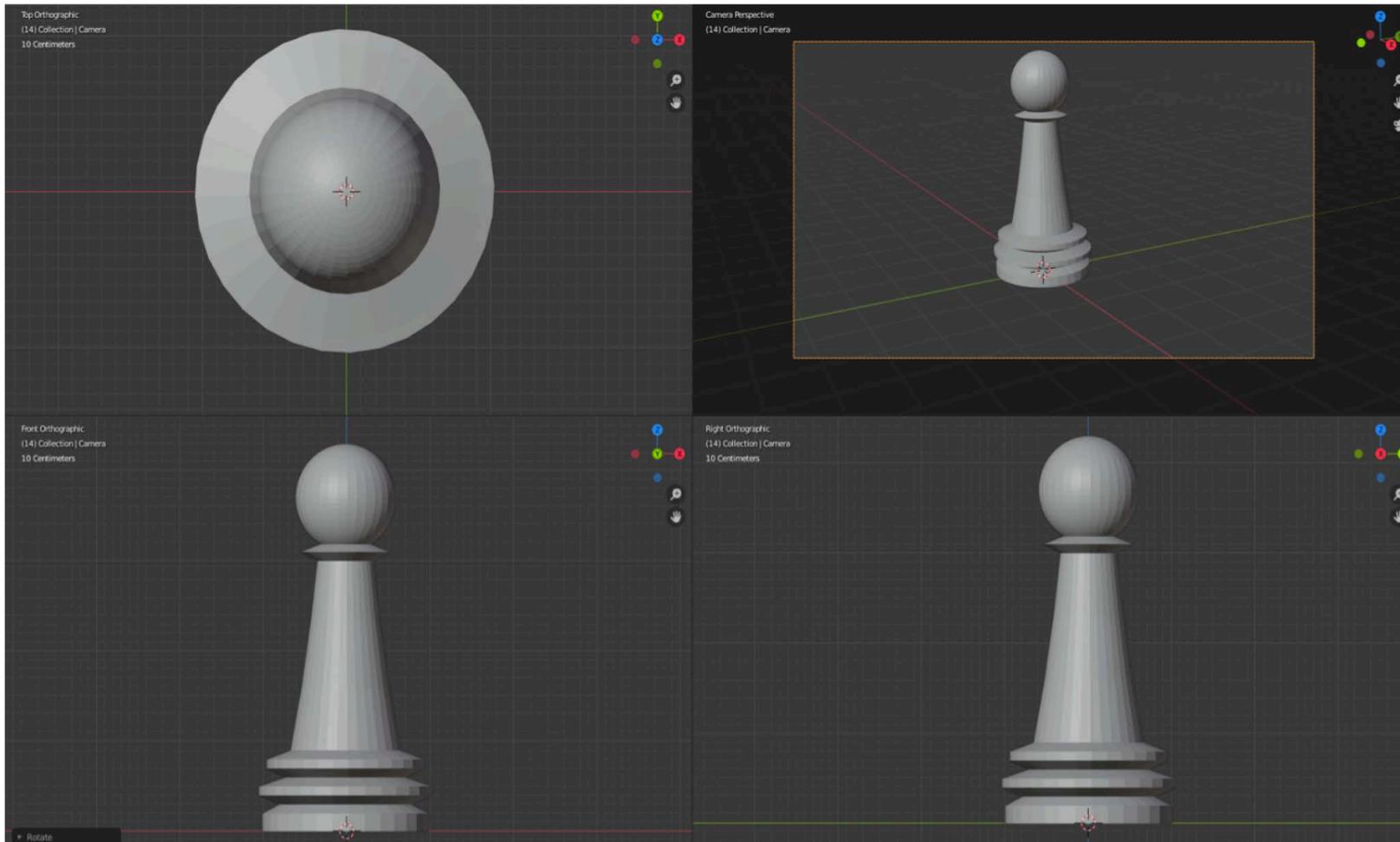
CHESS PAWN

Click on the **F key** - **FACE**



CHESS PAWN

Press the **TAB** key to return to the **OBJECT MODE**



CHESS PAWN

**There are many ways to achieve
a given effect.**

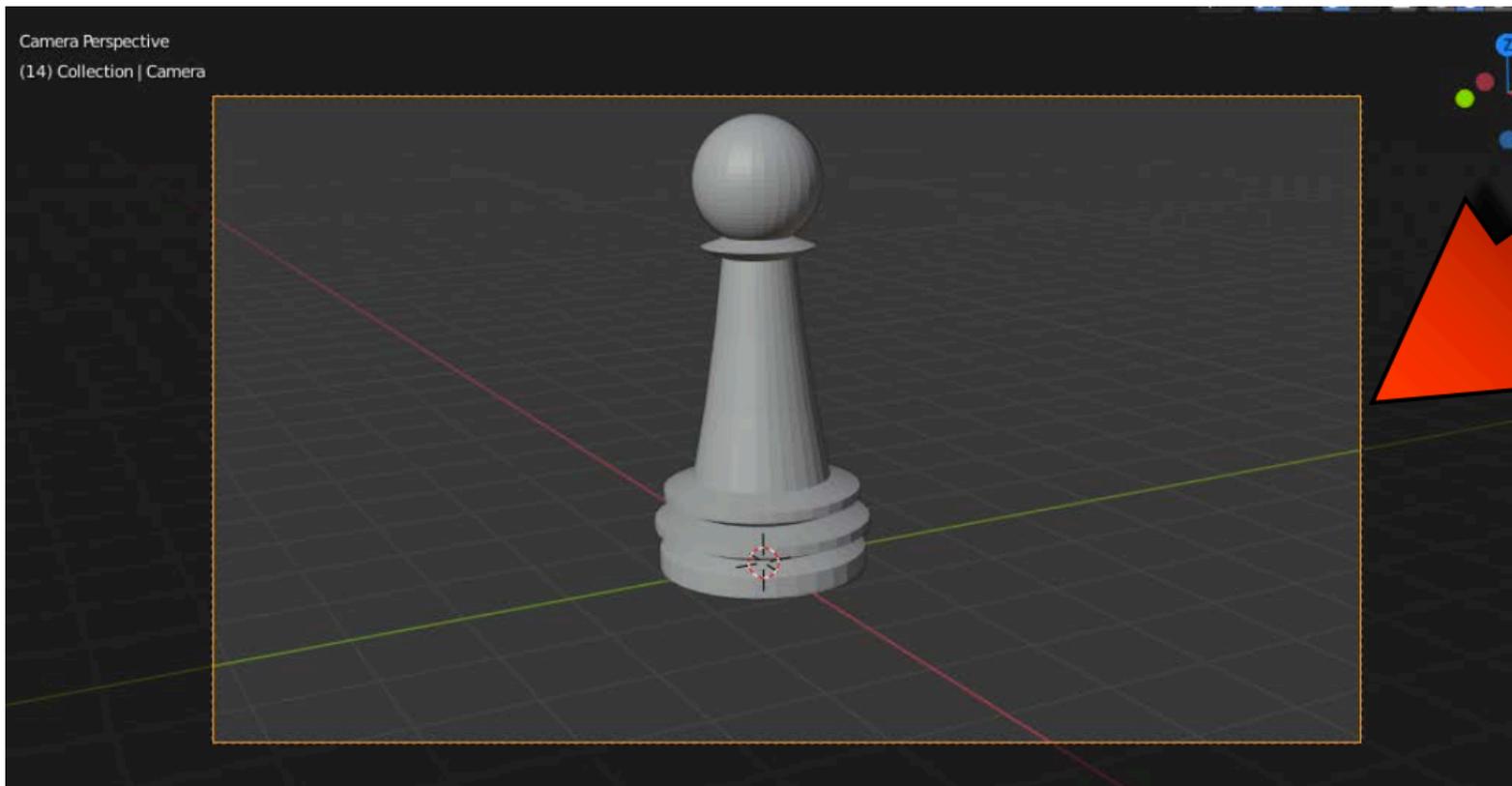
THE SIMPLER THE BETTER.

**This will be especially
noticeable when creating
models for 3D printing.**



CHESS PAWN

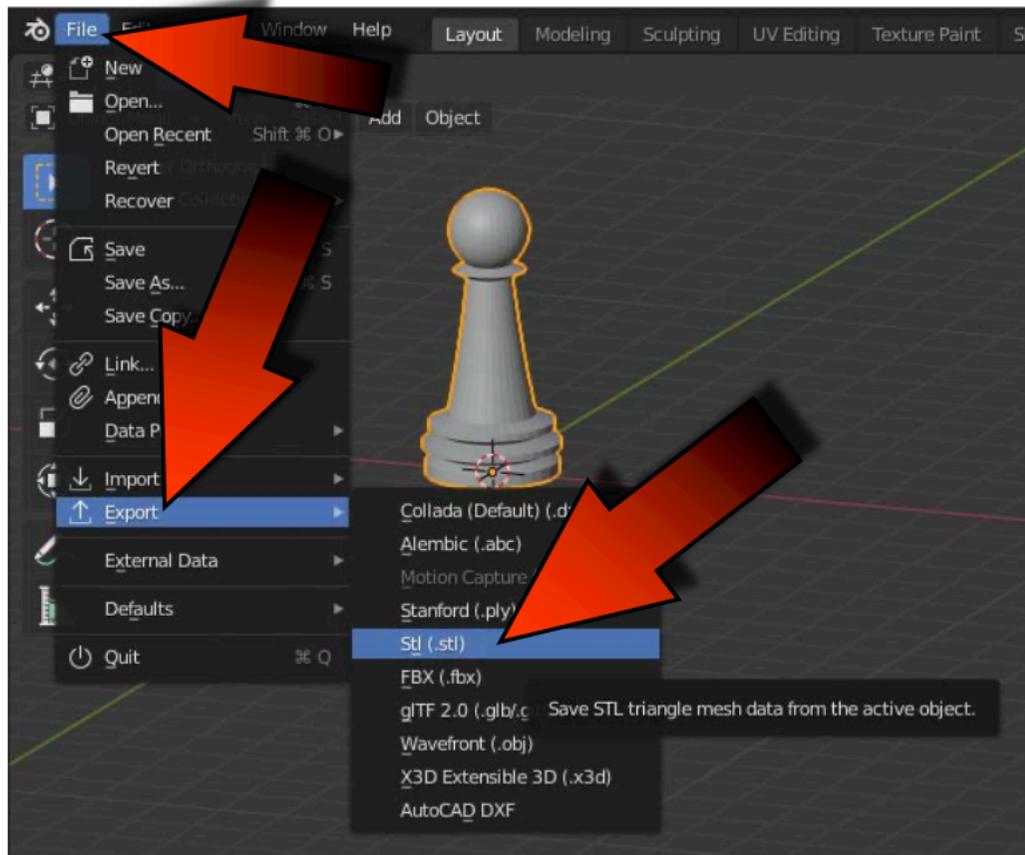
Press **Numpad-0** to see the
CAMERA view



CHESS PAWN

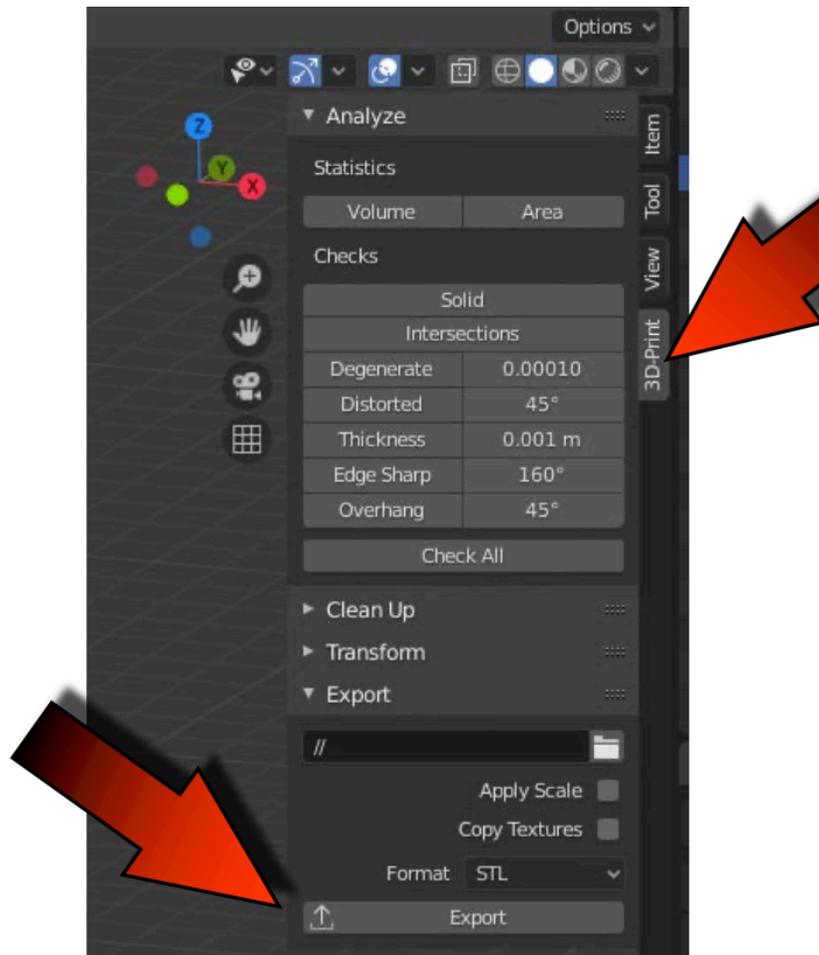
**To save a pawn as an STL file
for 3D printing**

select FILE / EXPORT / STL



CHESS PAWN

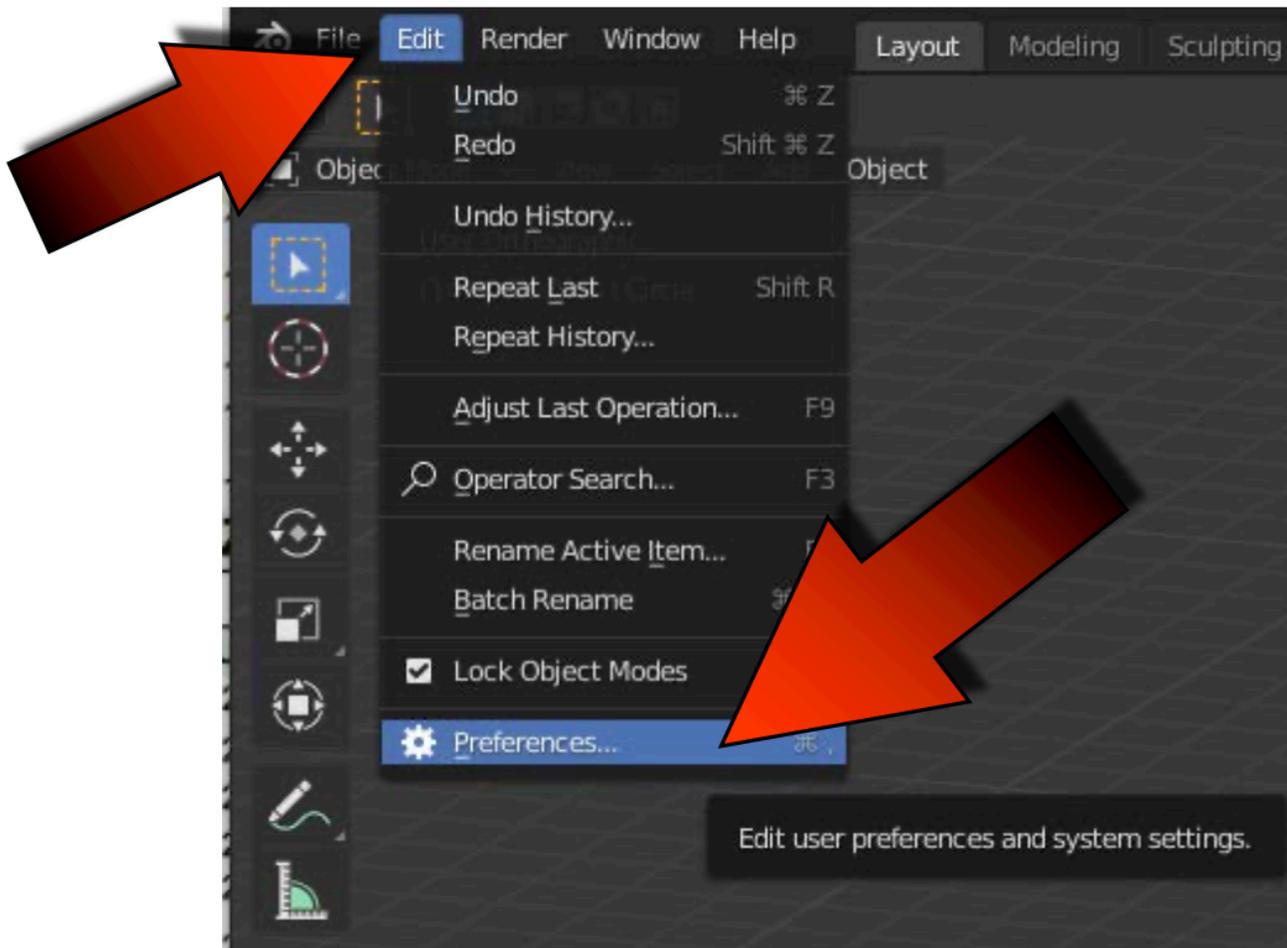
You can also **turn on a section** that will make our work easier.



CHESS PAWN

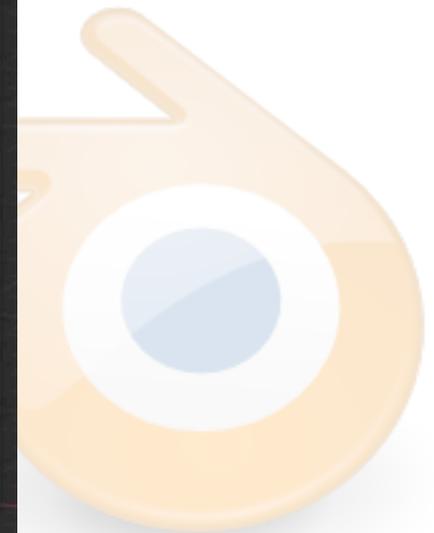
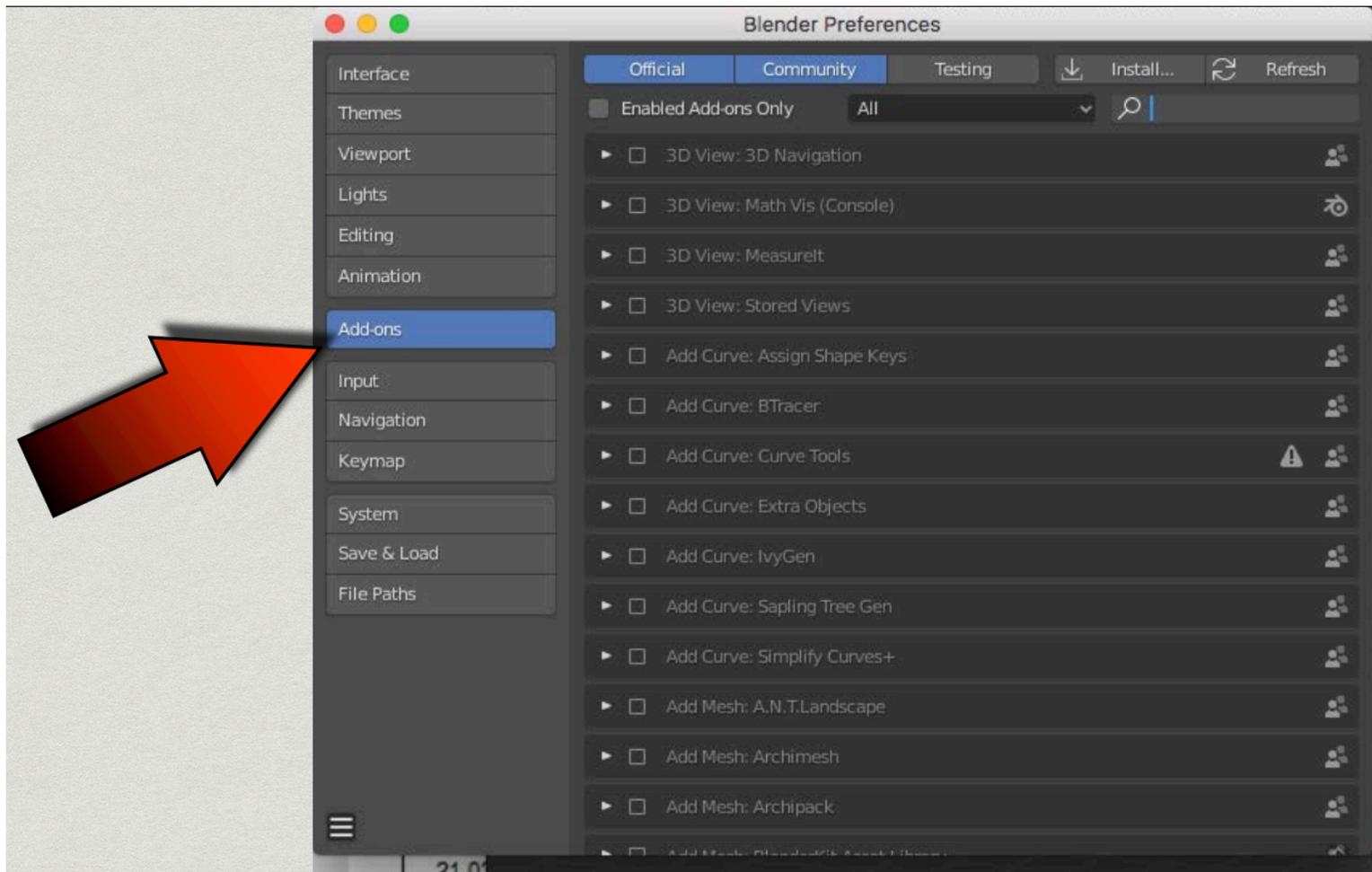
Choose

Edit / PREFERENCES



CHESS PAWN

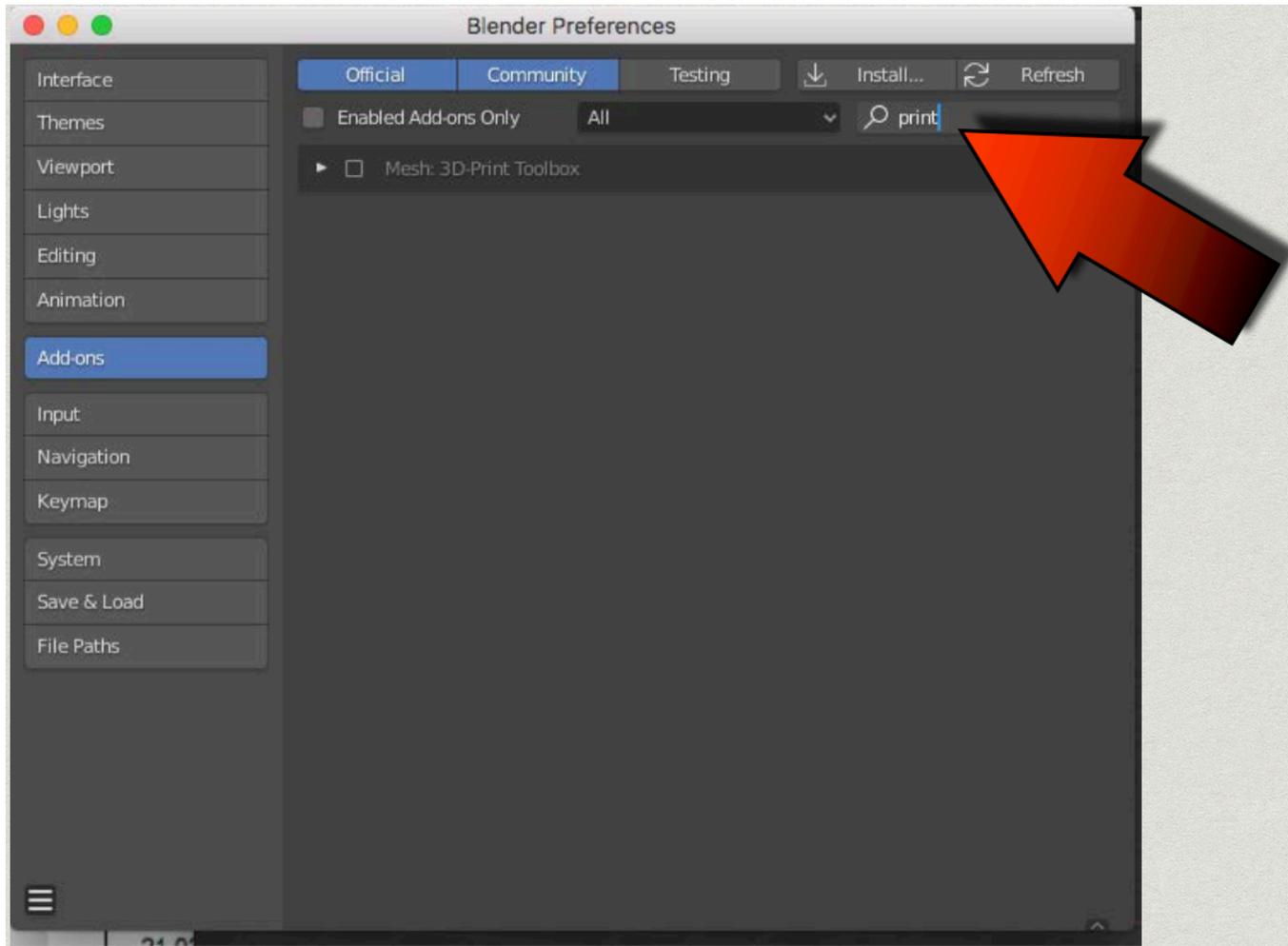
Choose Add-ons



CHESS PAWN

Enter

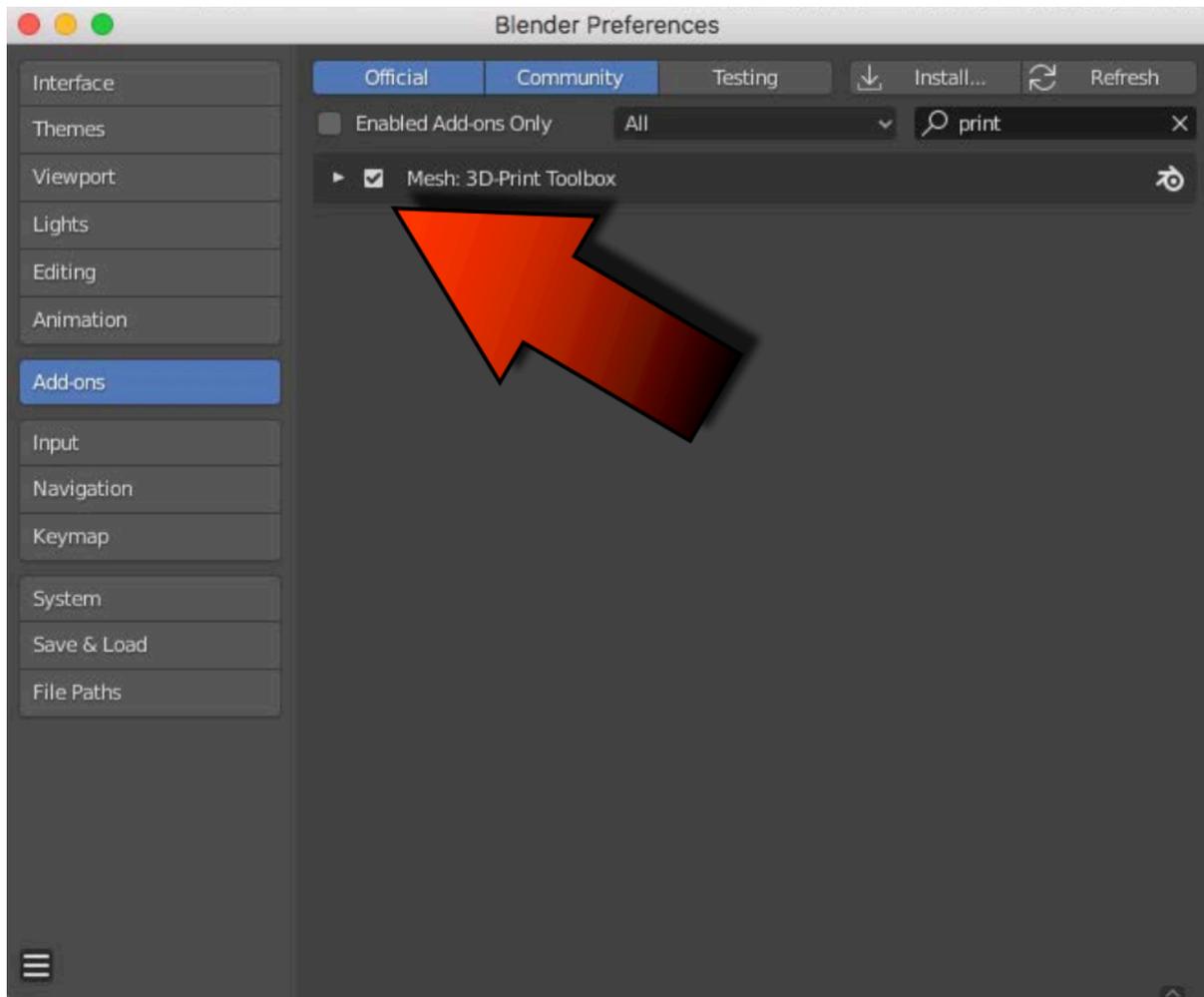
PRINT



CHESS PAWN

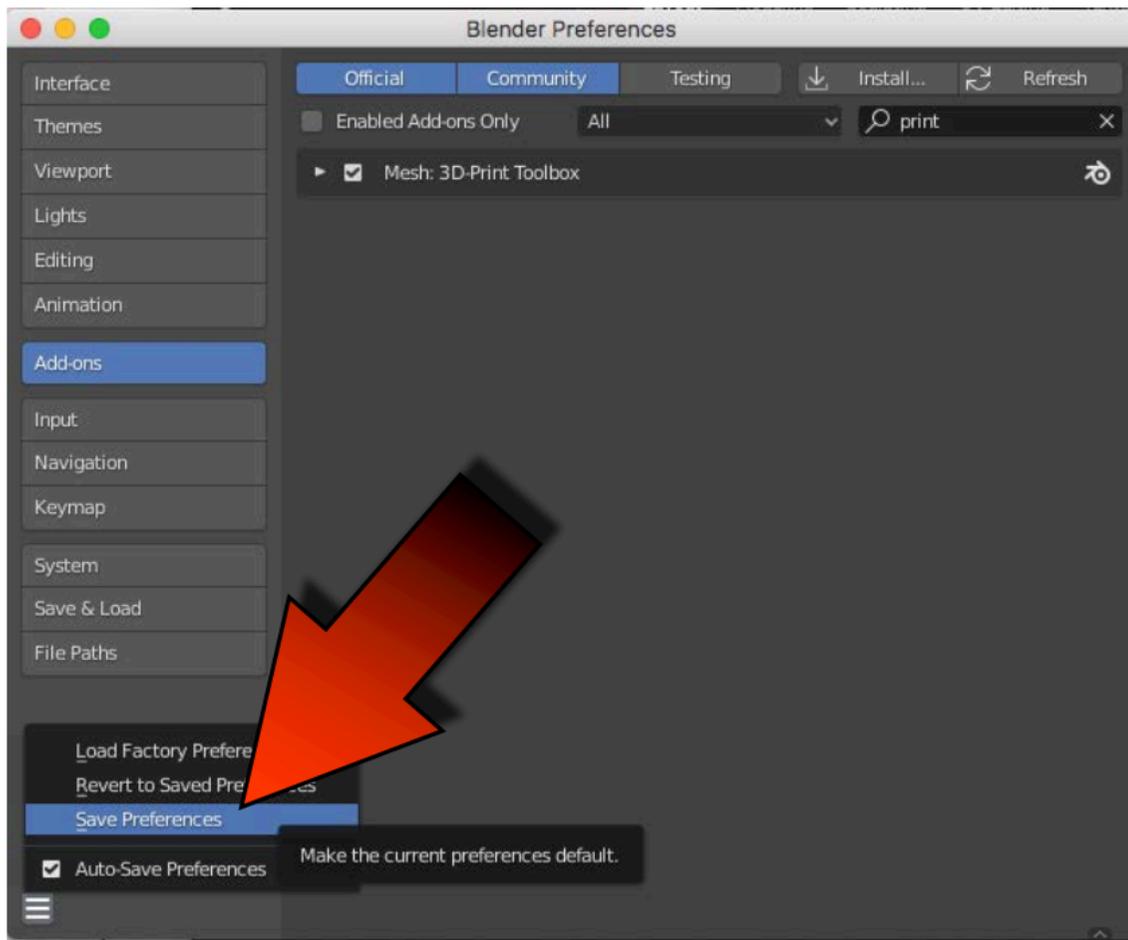
Mark

Mesh 3D-Print Toolbox



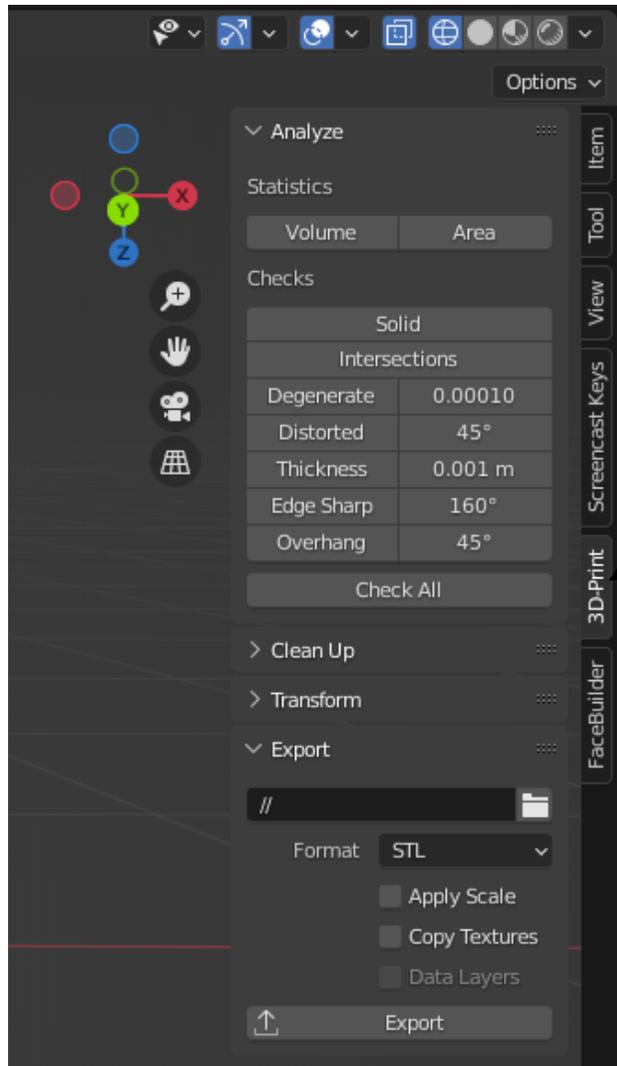
CHESS PAWN

**To save these settings permanently
click on the button on the lower left
and save it**



CHESS PAWN

If you press the **N** key in the 3D view, you will see the **bookmarks window**



BLENDER



**THANK YOU
FOR YOUR
ATTENTION**

JACEK KAWAŁEK