



Modelling in Blender 3.5

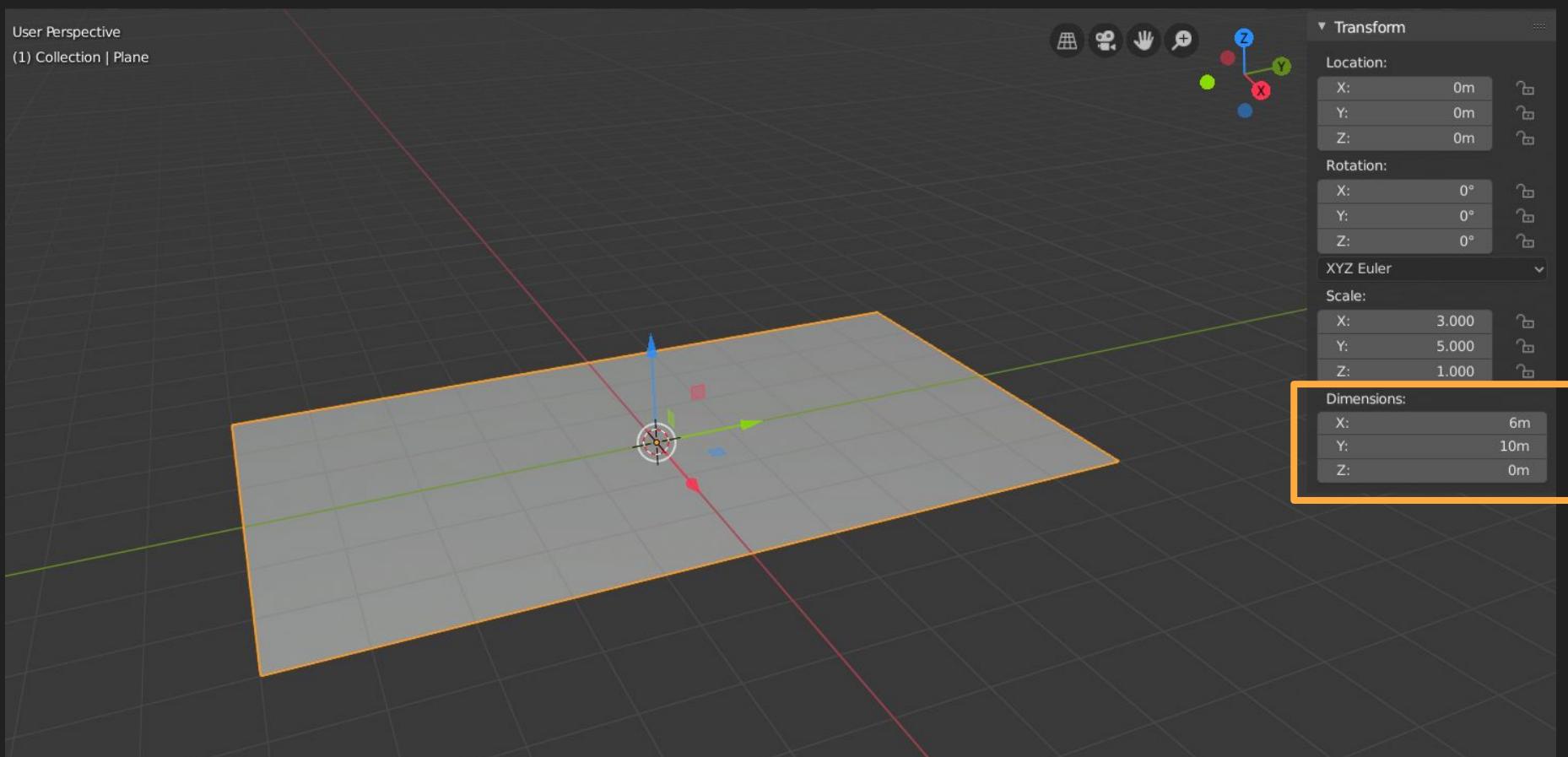
Paolo Zuzolo, PhD student UNIBO
paulo.zuzolo2@unibo.it



Esercizio

Add → Mesh → Plane

Properties - N

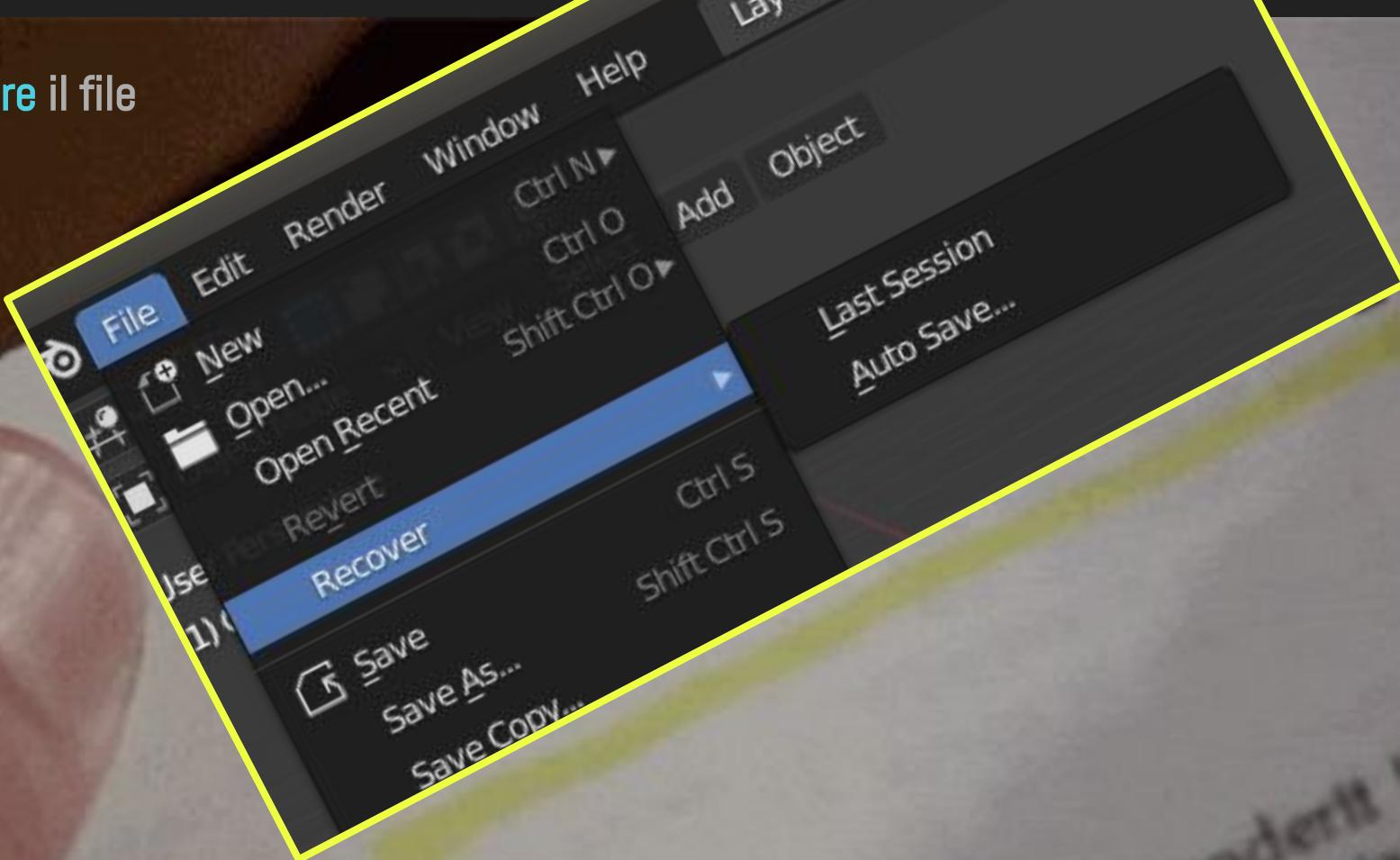


Salvare il file

PARANOIA

comprehension in your
own habitat now.

Salvare il file

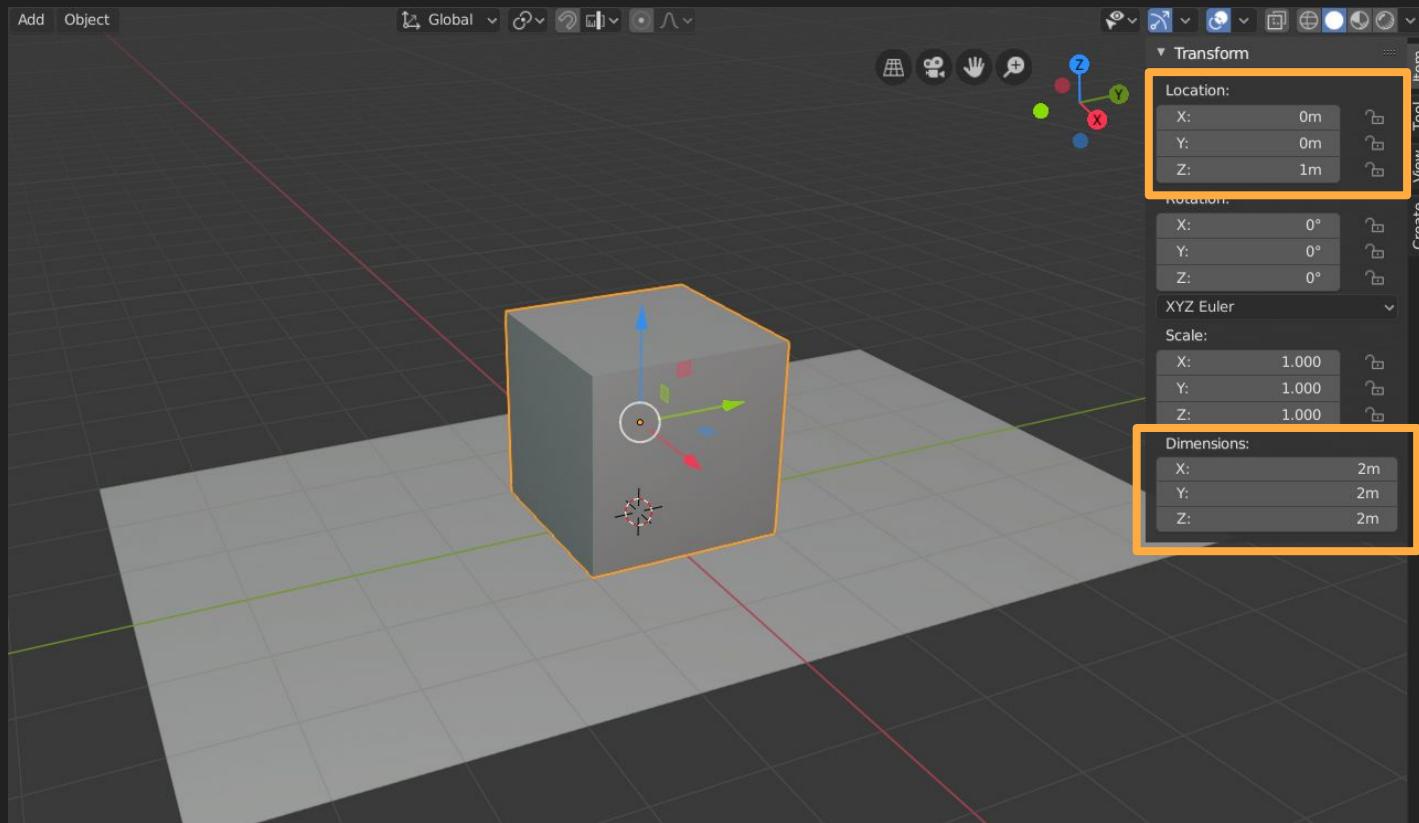


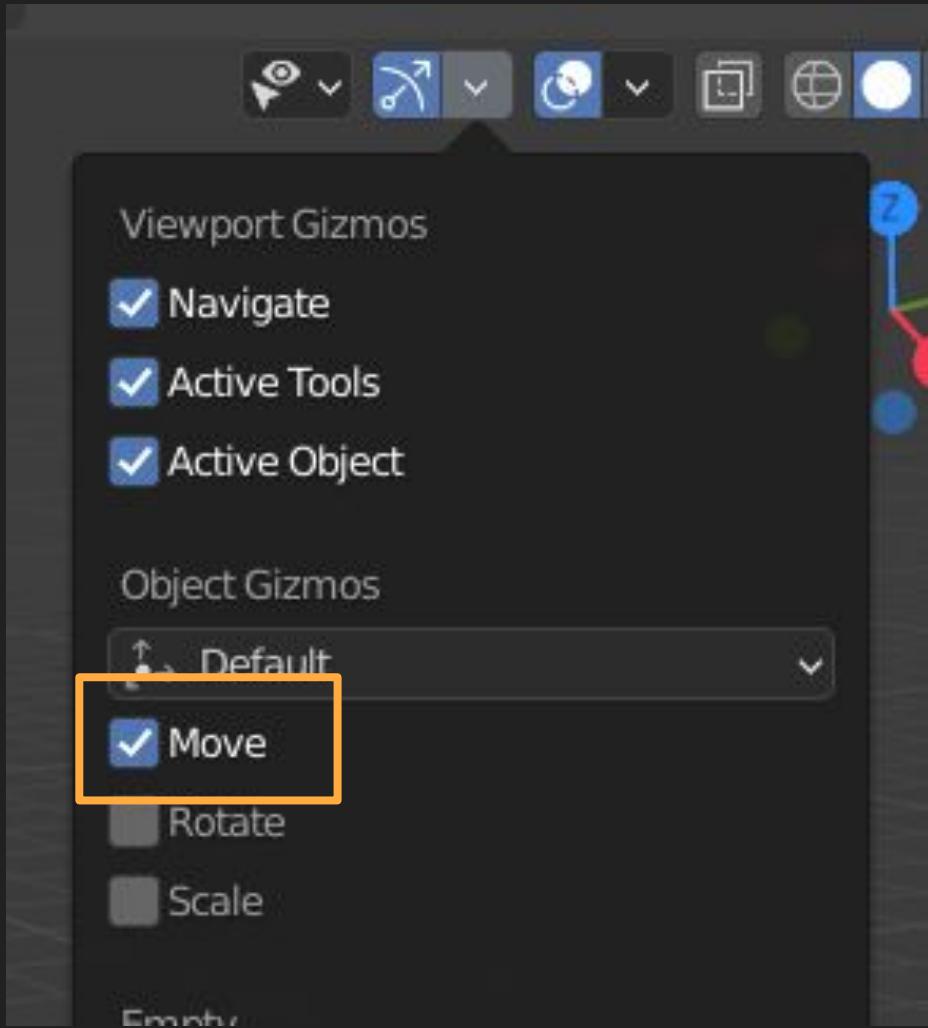


Il banchetto

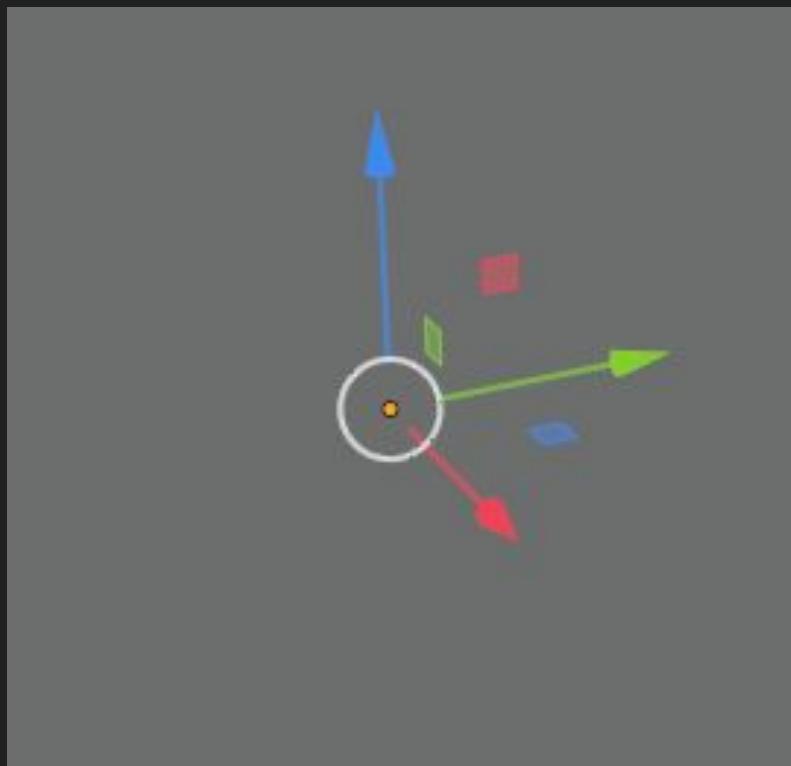
Add → Mesh → Cube

Properties - N

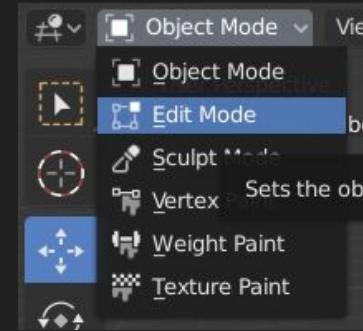




Object Gizmos

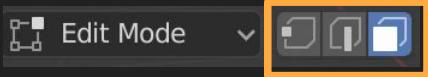
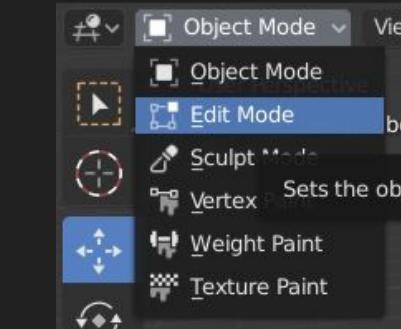


Passare in **Edit Mode**



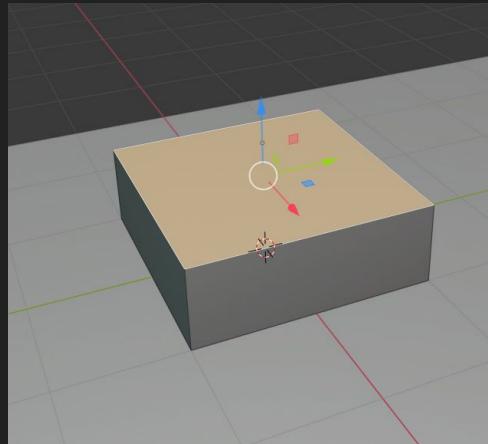
Abilitare Face select

Passare in **Edit Mode**



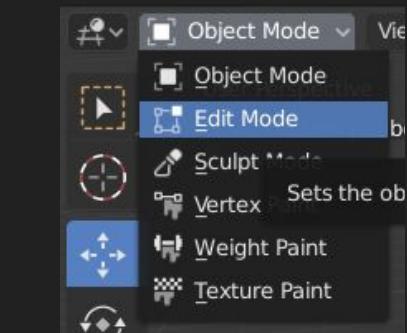
Abilitare Face select

Selezionare la faccia



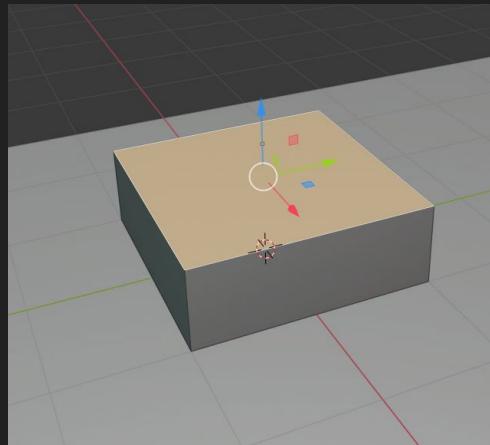
G → Z → -1.3m

Passare in **Edit Mode**



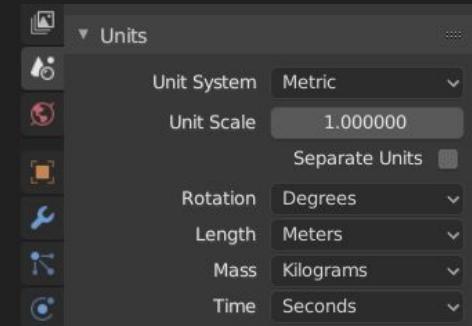
Abilitare Face select

Selezionare la faccia

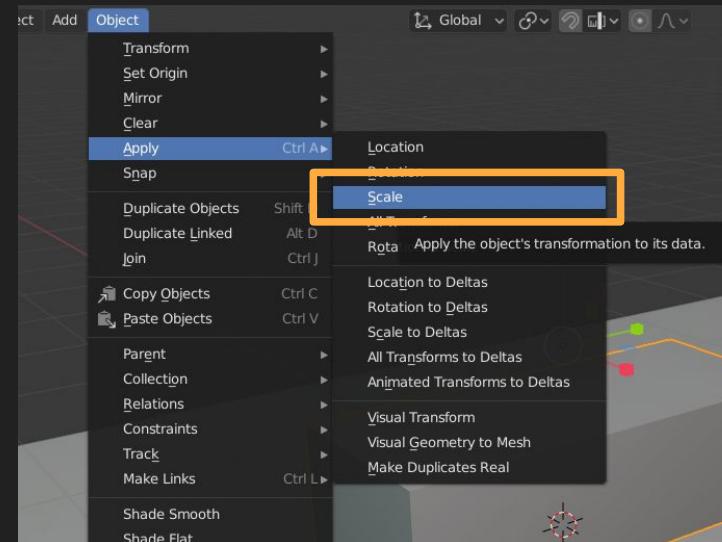
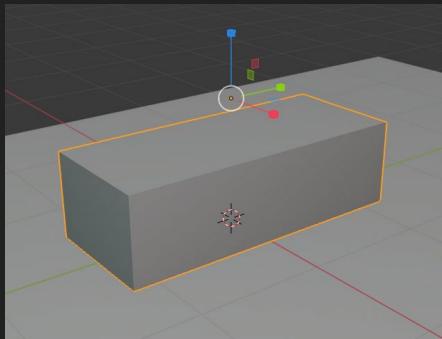
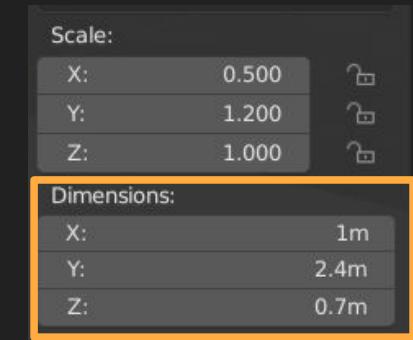


G → Z → -1.3m

Impostare unità metriche



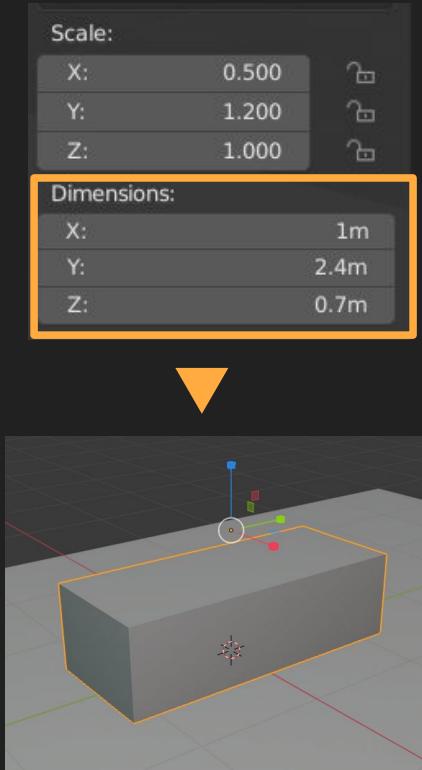
Tornare in Object mode e:



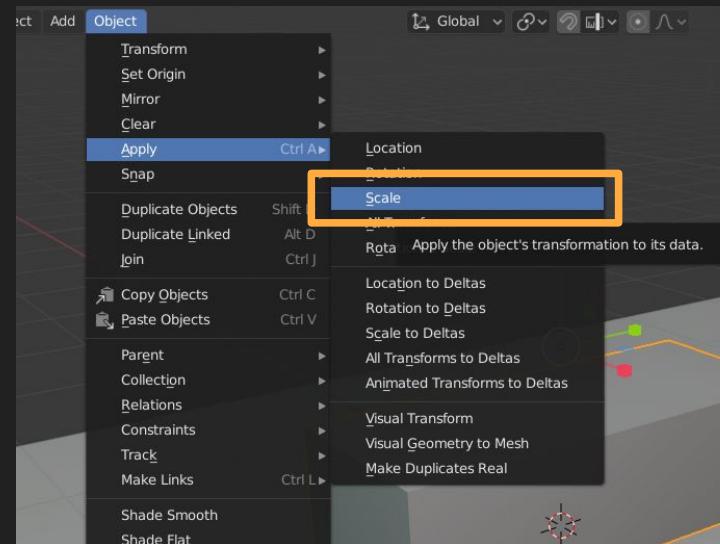
Applicare la scala

Scalare il cubo

Tornare in Object mode e:

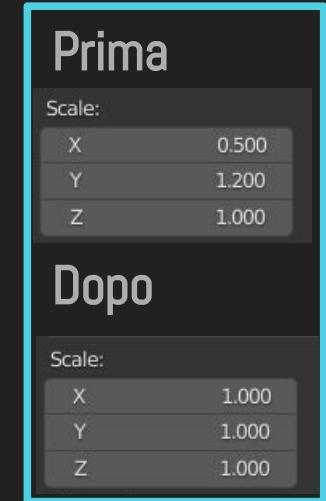


Scalare il cubo

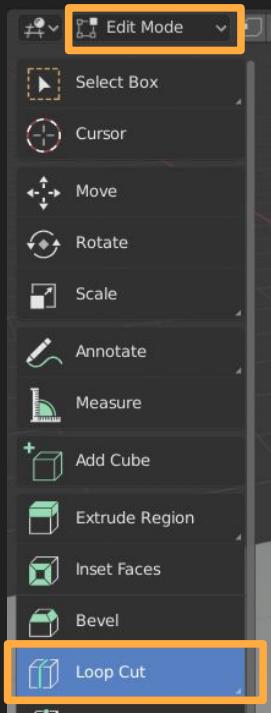


Applicare la scala

???

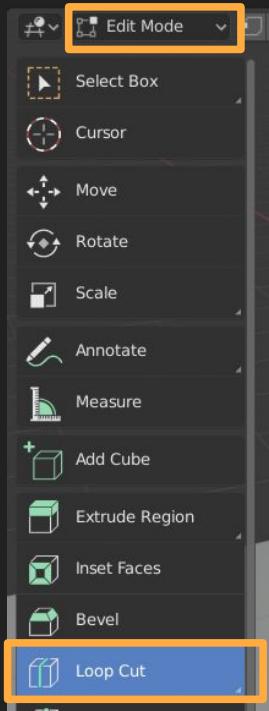


Edit Mode

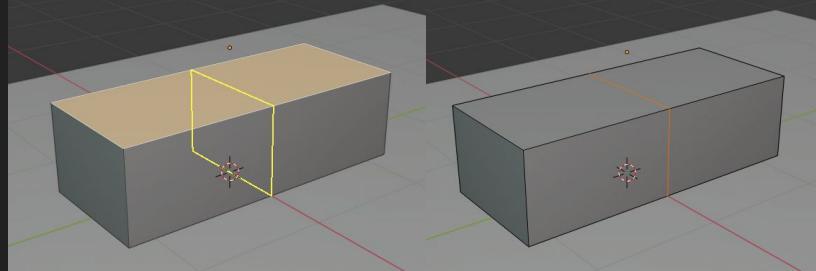


Tools - T
Loop Cut

Edit Mode

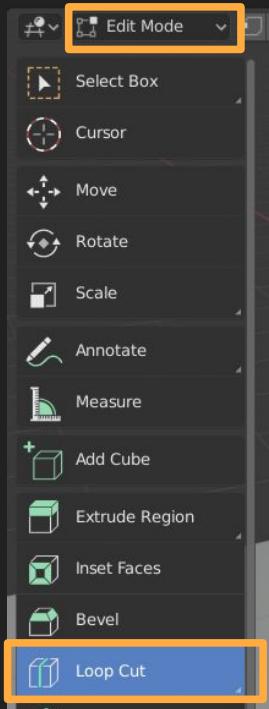


Click

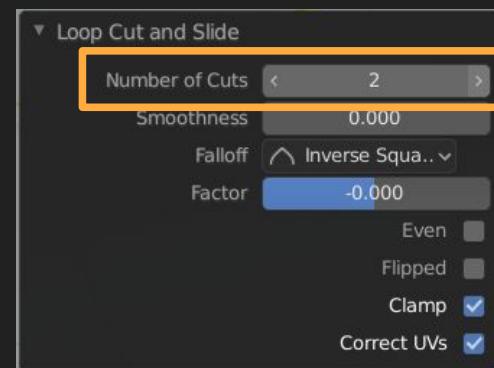
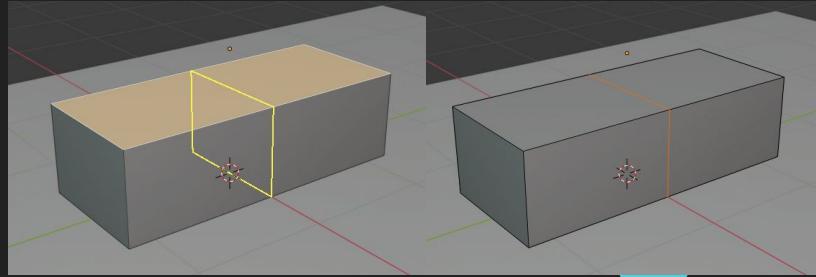


Tools - T
Loop Cut

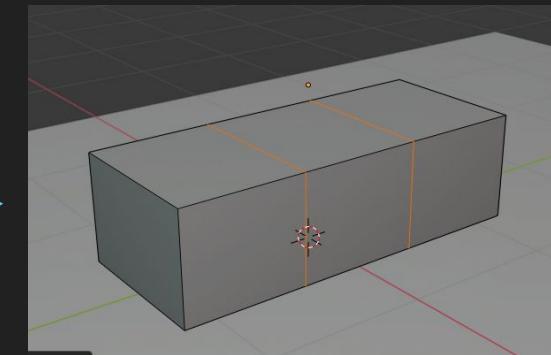
Edit Mode



Click

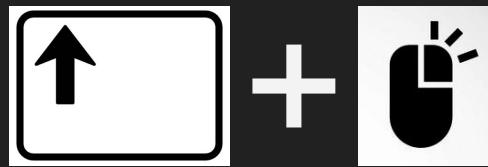
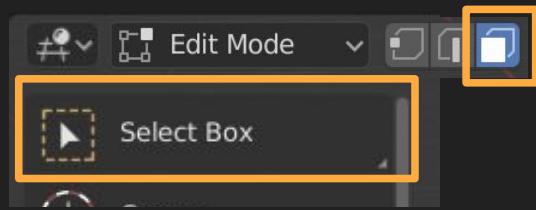


Impostare 2
tagli

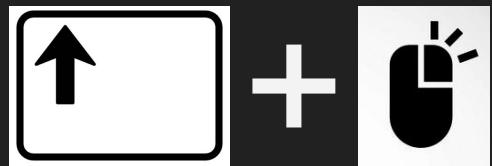
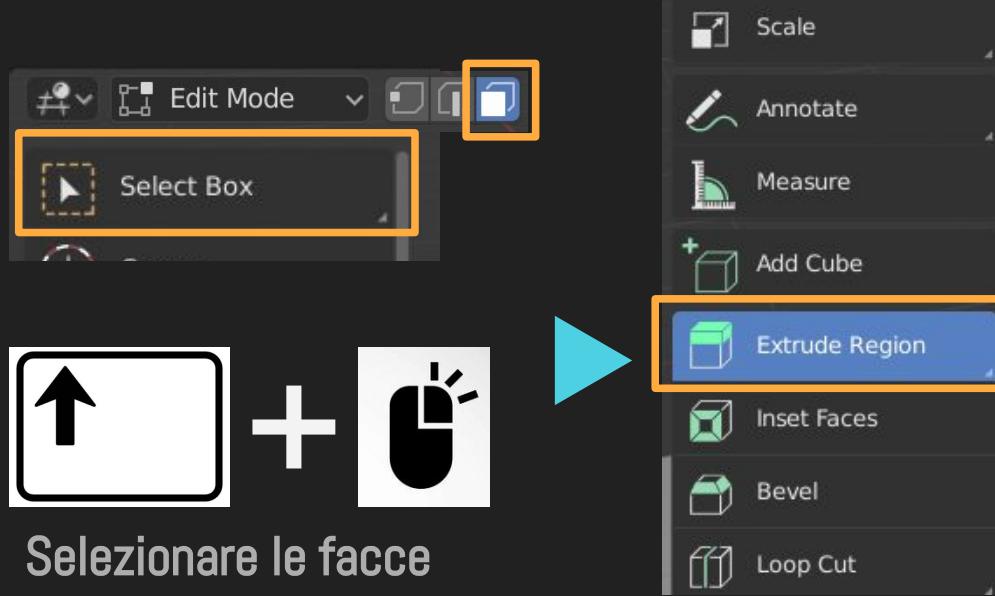


Tools - T

Loop Cut and
Slide

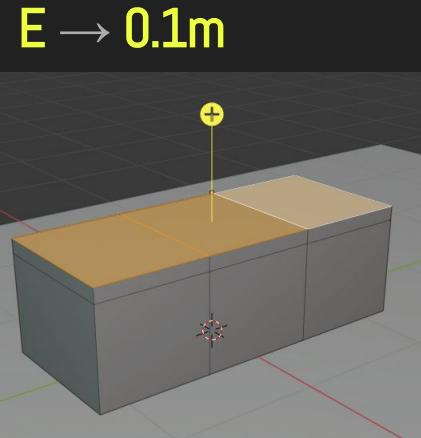
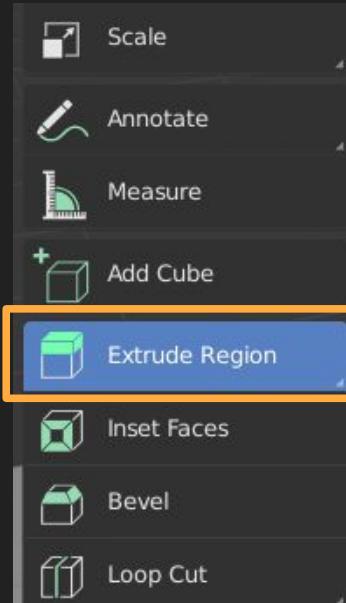
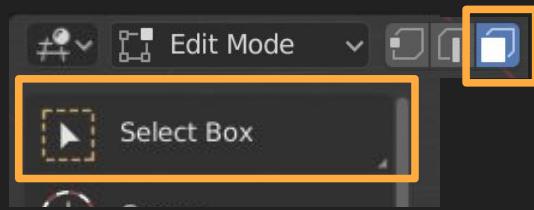


Selezionare le facce
superiori



Selezionare le facce
superiori

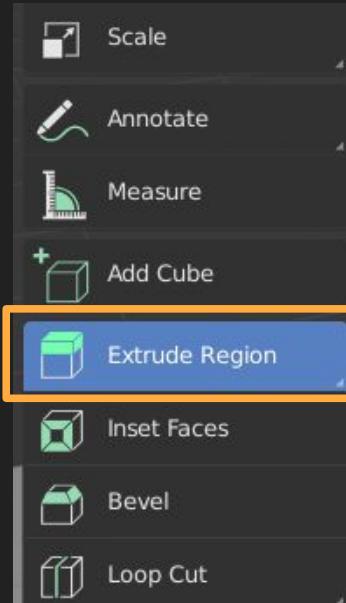
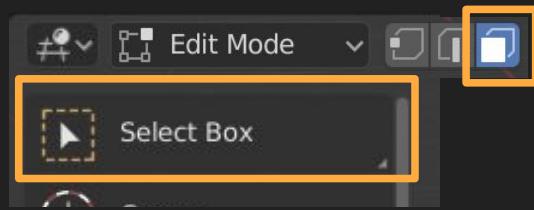
Tools - T
Extrude Region



Selezionare le facce
superiori

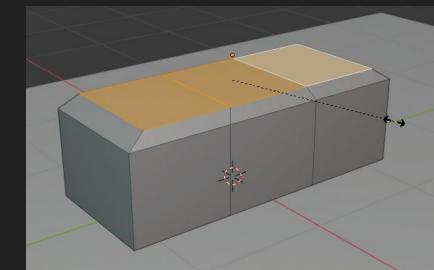
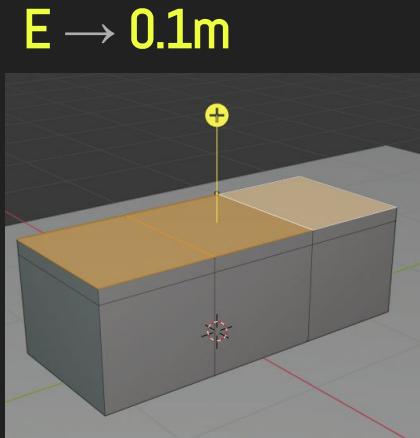
Tools - T
Extrude Region

NB: se si usa la shortcut, premendo ESC **si annulla lo spostamento** della regione estrusa, **non l'estruzione**. Per annullare l'estruzione occorre premere ESC ed effettuare un ctrl+z



Selezionare le facce
superiori

Tools - T
Extrude Region

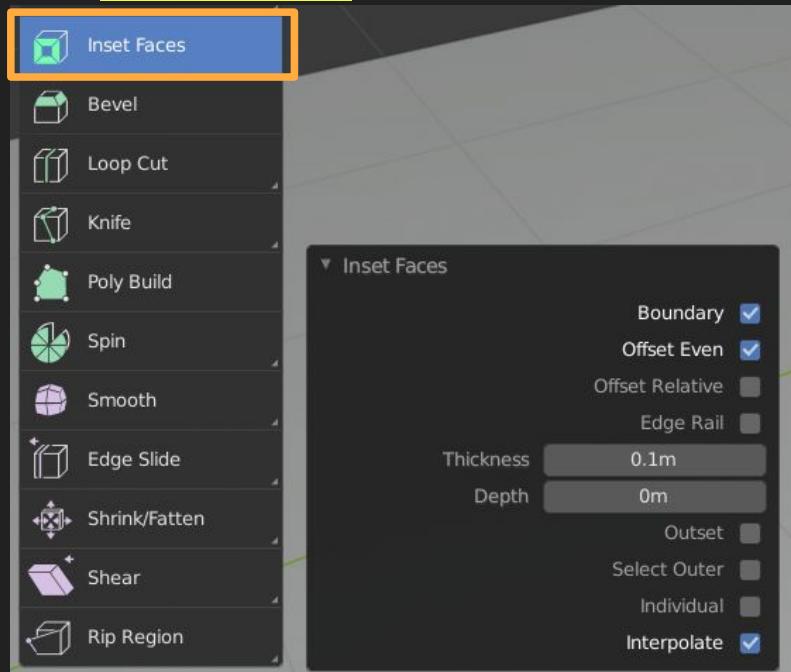


Scalare - S

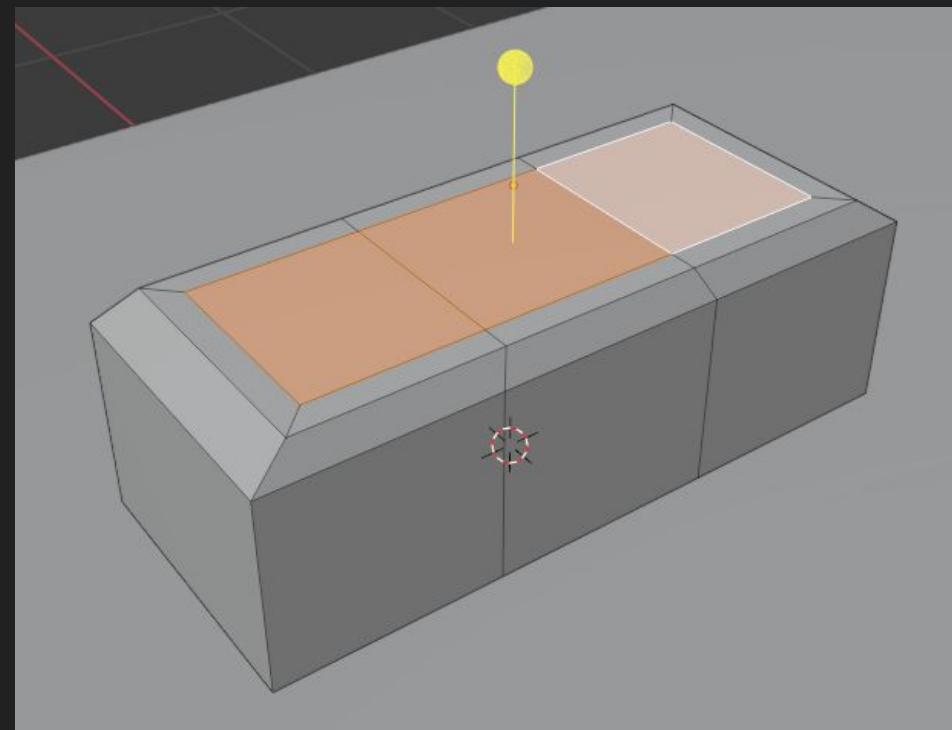
NB: se si usa la shortcut, premendo ESC **si annulla lo spostamento** della regione estrusa, **non l'estruzione**. Per annullare l'estruzione occorre premere ESC ed effettuare un ctrl+z

Tools - T

Inset Faces

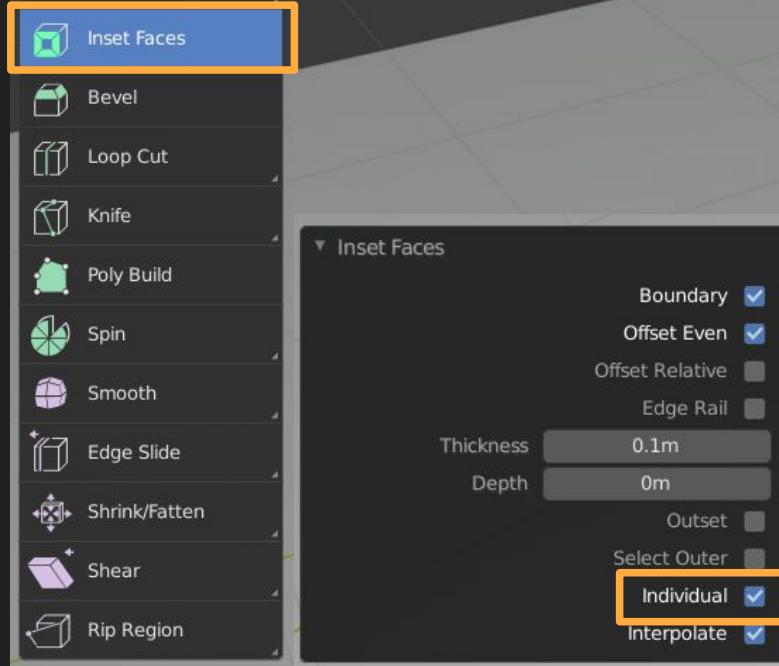


0.1m

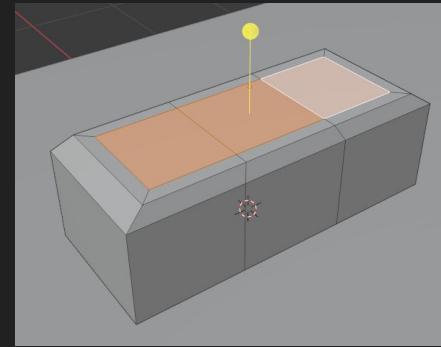


Tools - T

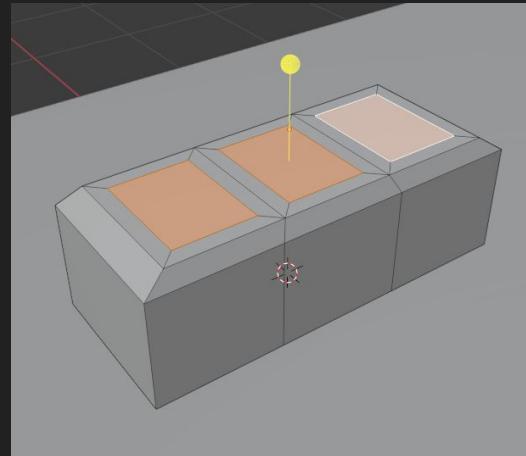
Inset Faces



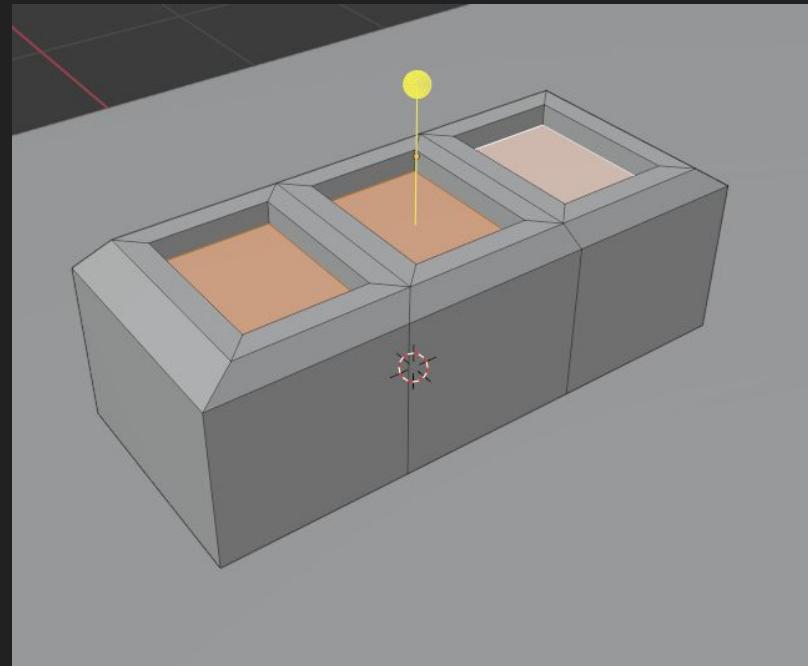
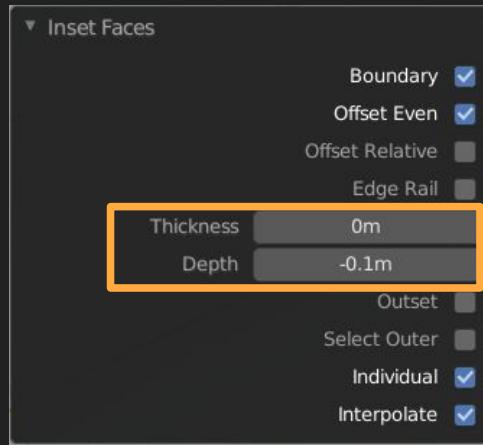
0.1m



Impostare inset
individual



Effettuare un secondo Inset Faces



Tips per orientarsi nello spazio 3D

Se mentre modellate avete **perso la bussola** ad esempio

la vostra mesh **si trova lontano** | siete **dentro un oggetto** | **la vista ruota** intorno ad un punto scomodo

esistono **shortcut** che vi permettono di avere di nuovo tutto a portata di mano



Home o inizio permette di vedere tutto ciò che è in scena effettuando uno **zoom out**

Il **punto** del tastierino numerico si **avvicina** ad un singolo oggetto con uno **zoom in** ed imposta questo come pivot per la rotazione

Tips per orientarsi nello spazio 3D

Se mentre modellate avete **perso la bussola** ad esempio

la vostra mesh **si trova lontano** | siete **dentro un oggetto** | **la vista ruota** intorno ad un punto scomodo

esistono **shortcut** che vi permettono di avere di nuovo tutto a portata di mano

Shift + B permette di effettuare una **selezione rettangolare** sull'elemento al quale vogliamo **avvicinarci** e ristabilisce anche il pivot di rotazione



Tips per orientarsi nello spazio 3D

Blender è un software che pone le sue basi sulla velocità data dalle **scorciatoie da tastiera**; è possibile effettuare quasi tutto senza utilizzare l'interfaccia grafica.

Tuttavia ciò ci può portare a **rimanere incastrati** in situazioni di blocco della visuale, sparizione di oggetti, perdita dell'orientamento e molto altro.

Ecco alcune **soluzioni**:

1. **ESC** (a meno che non stiate renderizzando... comunque non fa male premere **ESC** di tanto in tanto)
2. Controllate le collection (tasti **1,2,3...0**)
3. Oggetti (o MESH!) **nascosti** (**ALT + H**)
4. Modellazione **isolata** (/ del tastierino)
5. Qualcosa di **sconosciuto**: ripetere l'operazione appena effettuata (alt+B, / del tastierino ecc)
6. Impossibile capire cosa sia **accaduto** (operazioni effettuate: Edit → Undo History)
7. **Ripetere** l'ultima operazione(Shift +R, F9 per rivedere parametri)



ARGAH!

Grab Rotate Scale

G R S



Grab Rotate Scale

G R S

Extrusion

E

Inset

I



Grab Rotate Scale

G R S

Extrusion

E

Inset

I

Object mode

Object

Edit mode

Mesh

Ordine e disciplina

Collections

Naming

Search

F2 / CTRL+F2

F3



Come procedere?



Slide
32



Slide
36



Slide
50

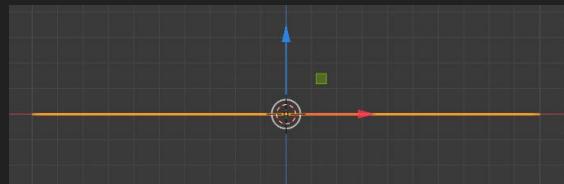


Slide
58

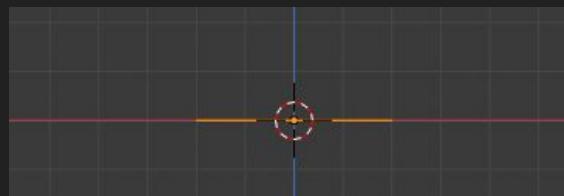


Sacchi

Add Plane - View Front Orto 1

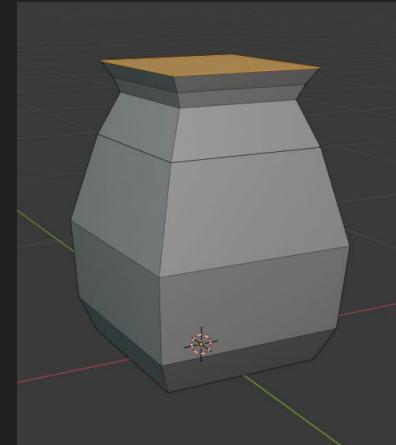
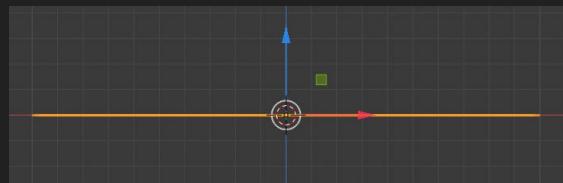


Edit → Scale → 0.2

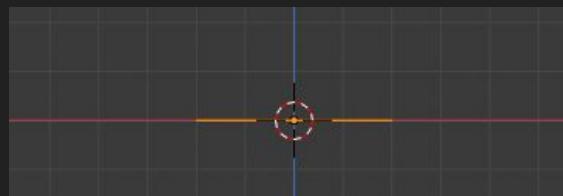


Extrude e Scale

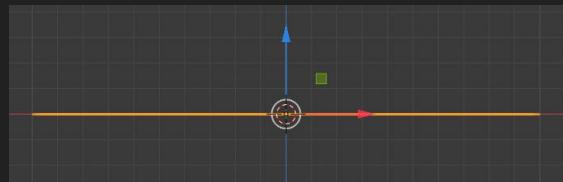
Add Plane - View Front Orto 1



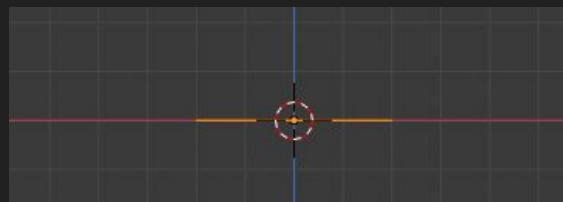
Edit → Scale → 0.2



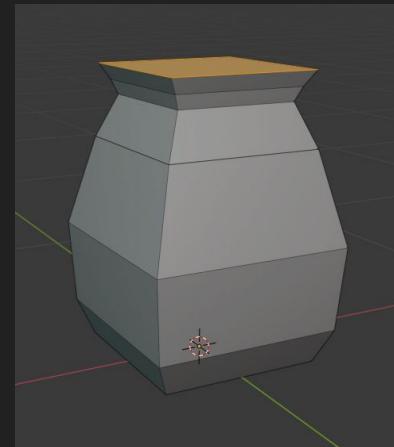
Add Plane - View Front Orto 1



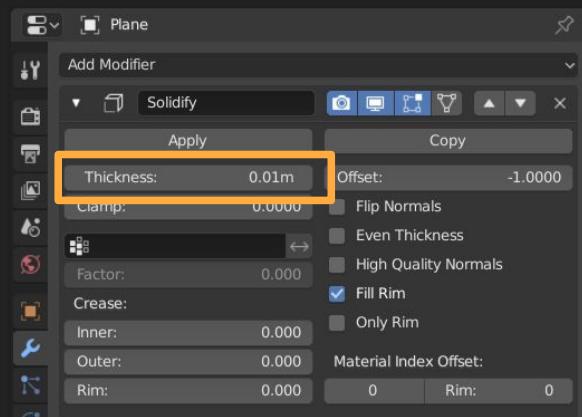
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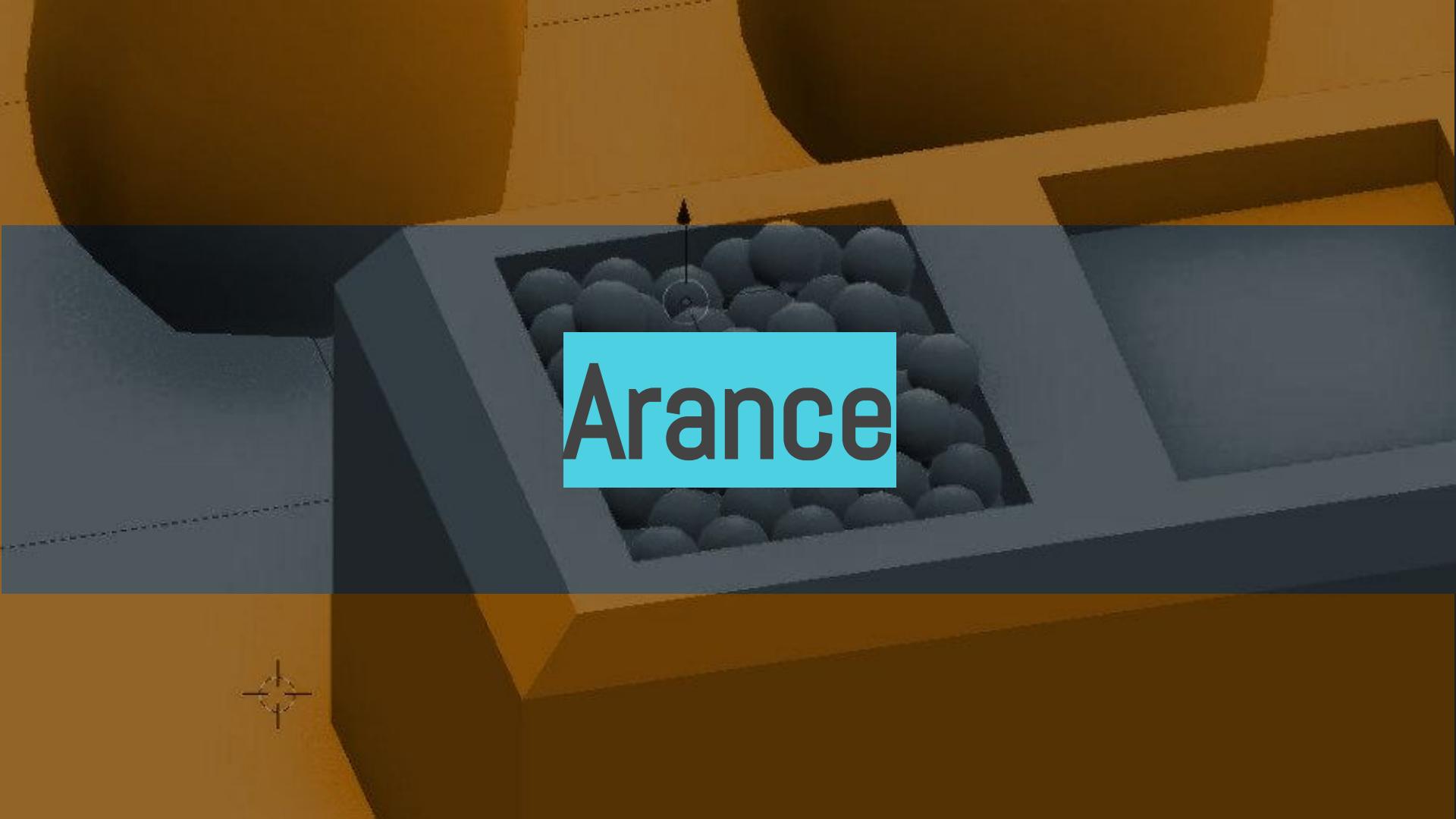


Extrude e Scale



Modifiers

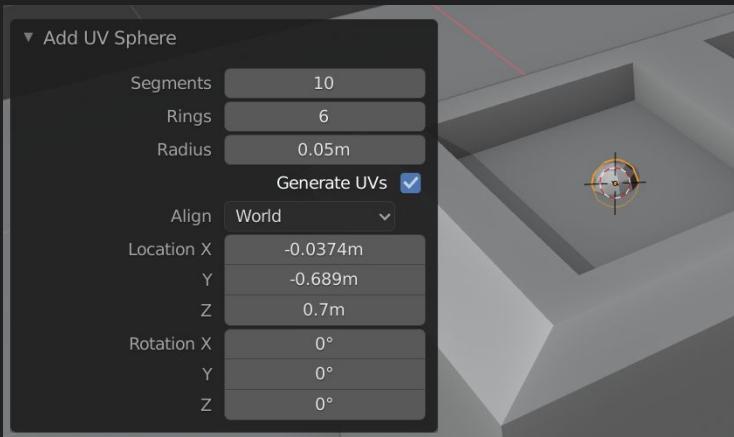




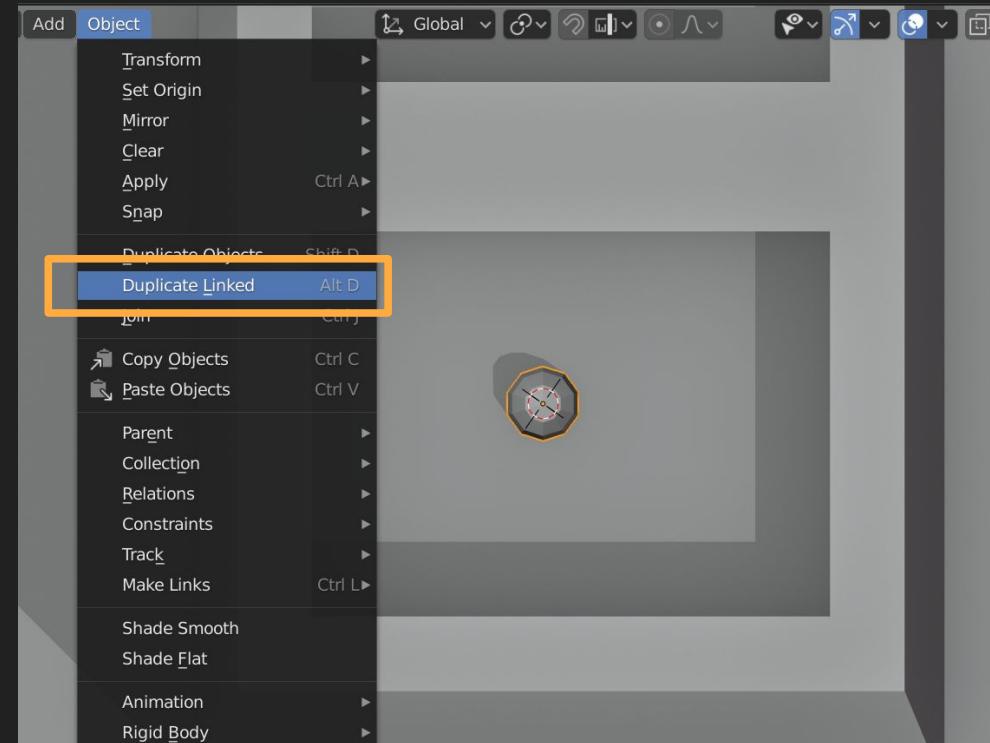
A close-up photograph of a box filled with dark, round fruits, likely oranges, set against a bright, warm background. The box is open, revealing the fruit inside. A small circular logo with a stylized letter 'P' is visible on the top edge of the box. The word "Arance" is overlaid in large, bold, black letters on a light blue rectangular background in the center of the image.

Arance

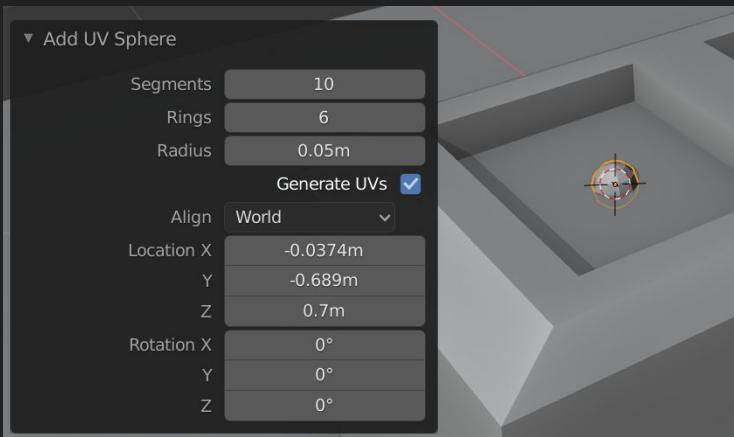
Add Sphere - View Top Ortho 7



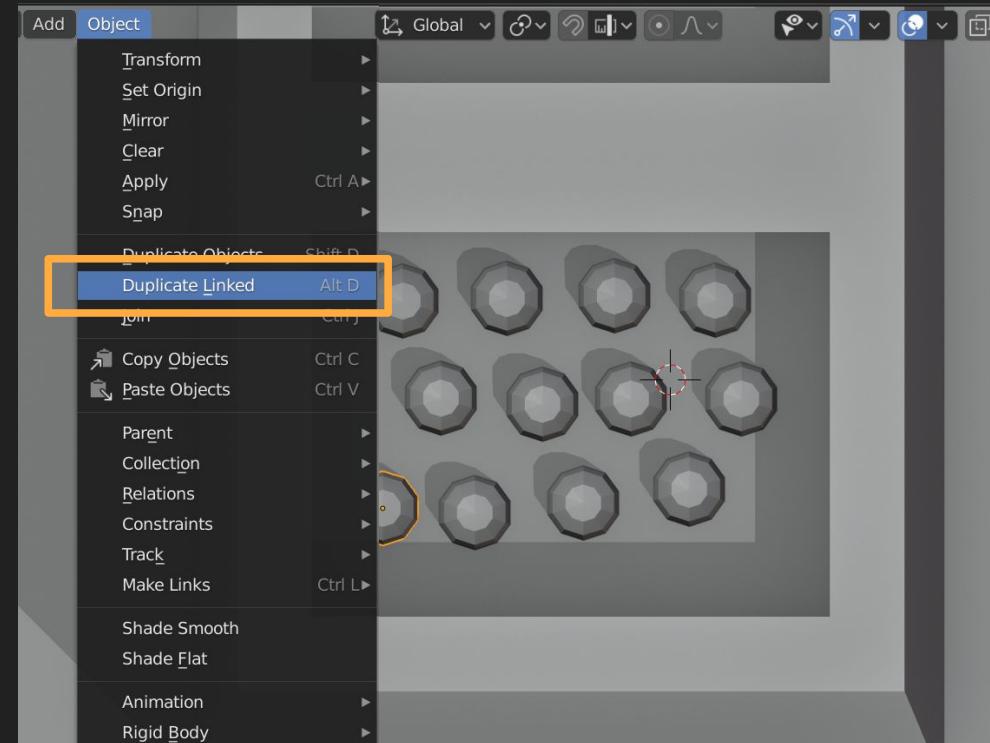
Duplicate Linked Alt+D



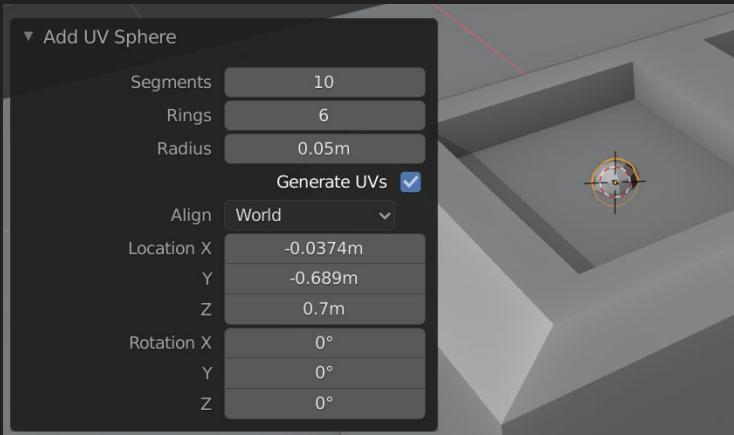
Add Sphere - View Top Ortho 7



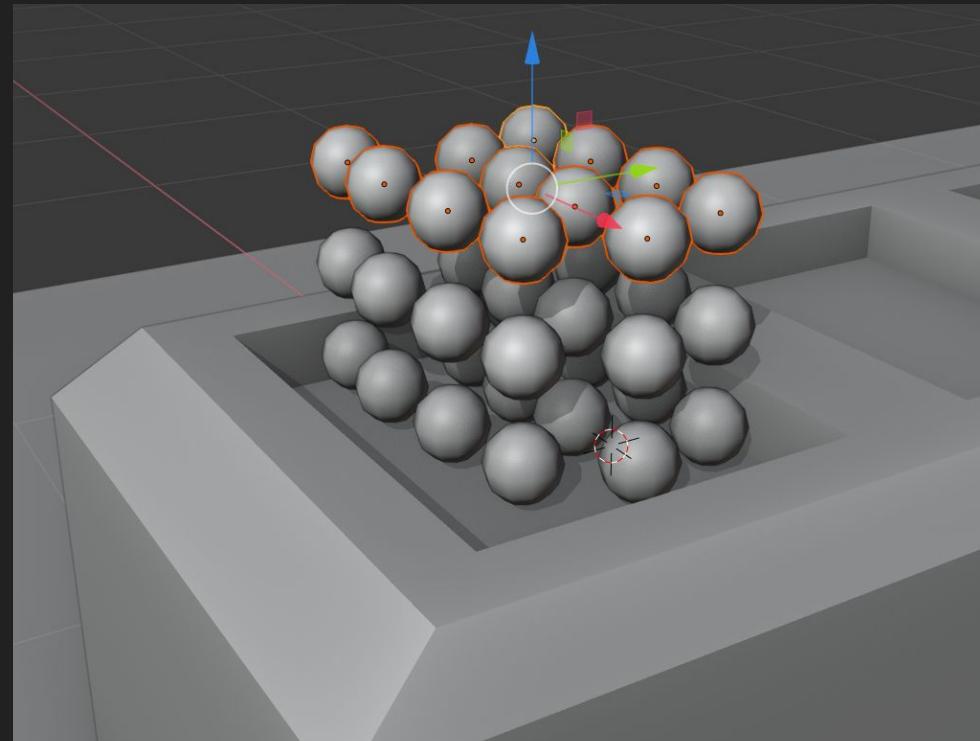
Duplicate Linked Alt+D



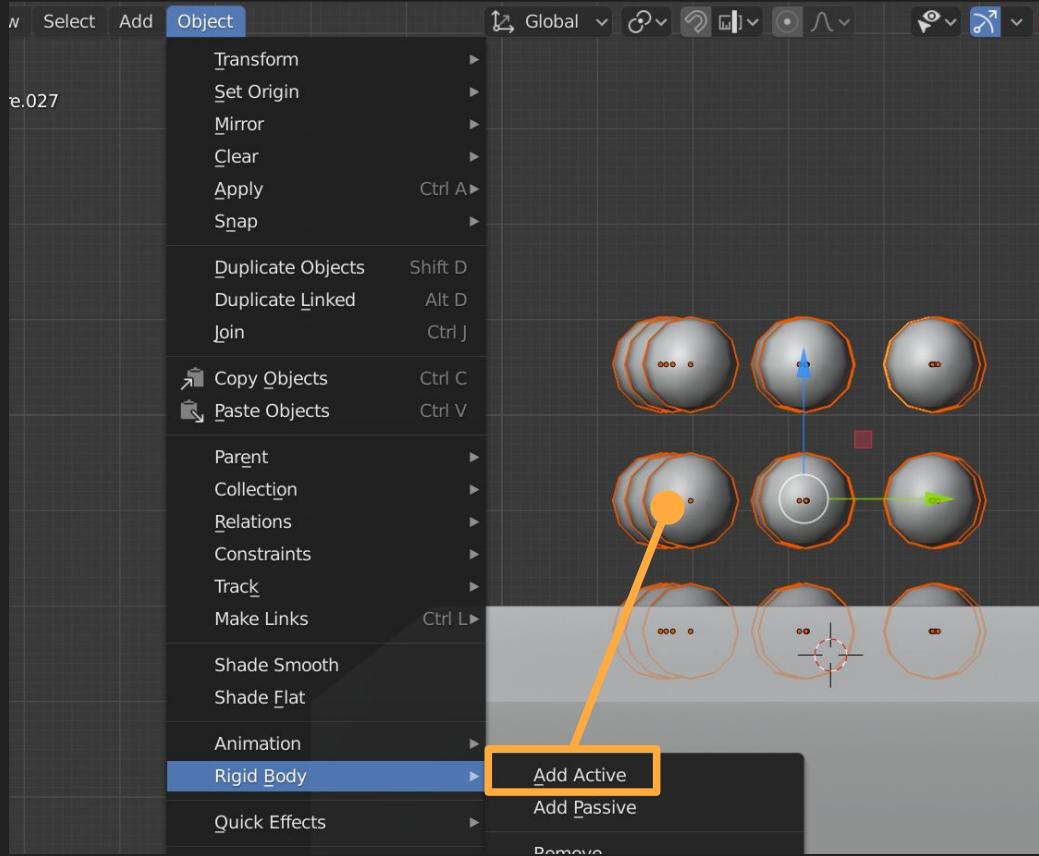
Add Sphere - View Top Ortho 7



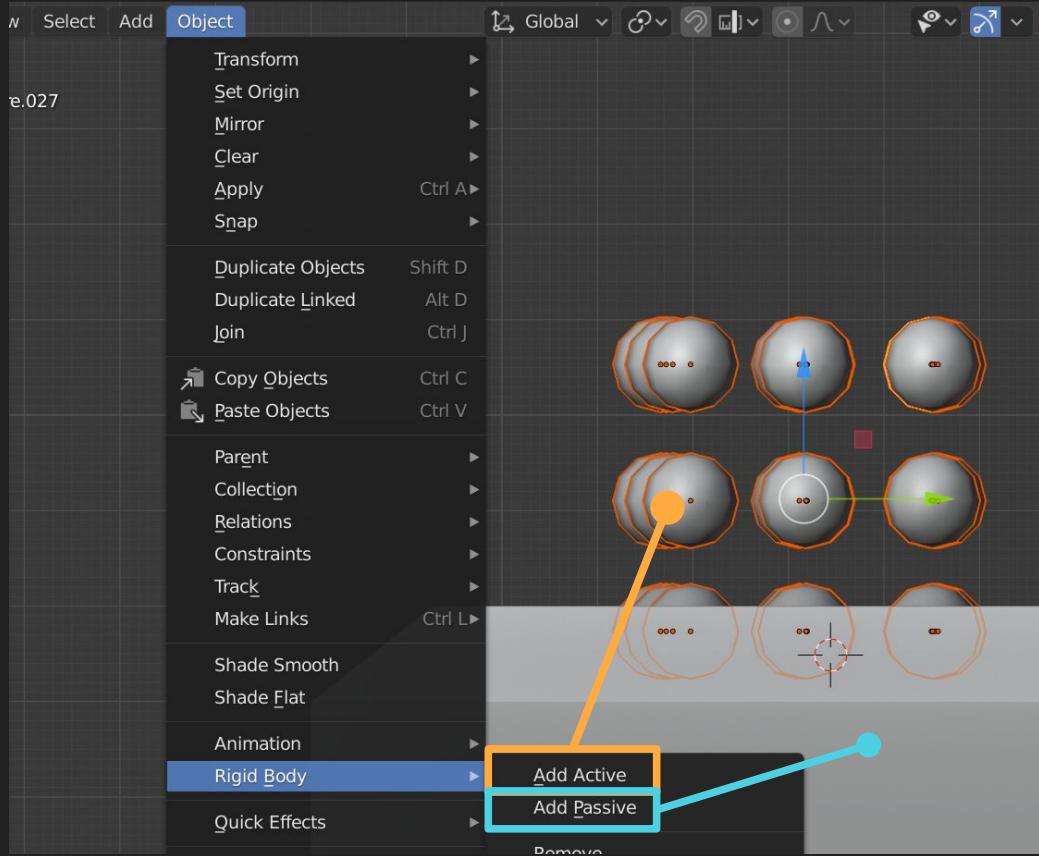
Duplicate Linked Alt+D



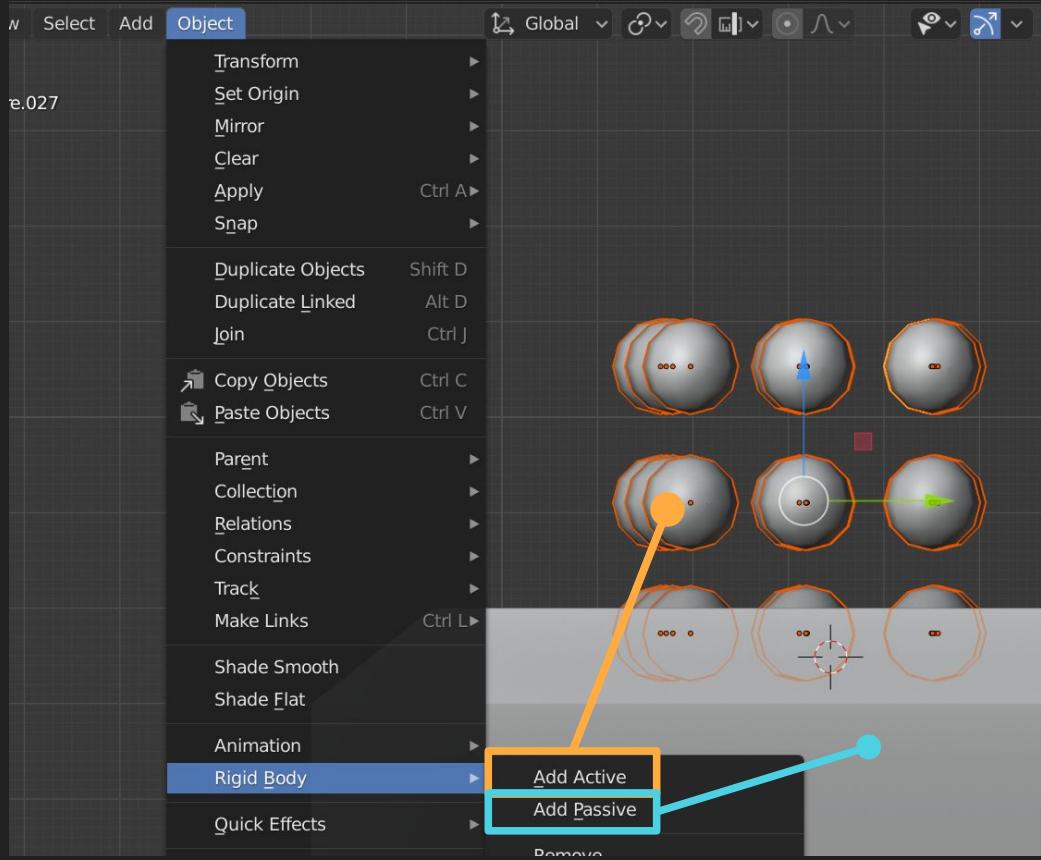
Rigid Body Physics



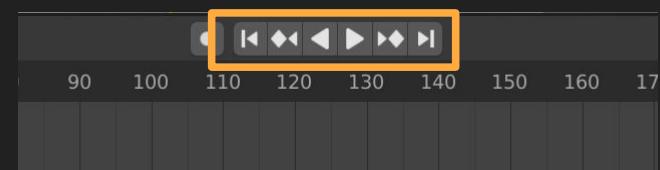
Rigid Body Physics



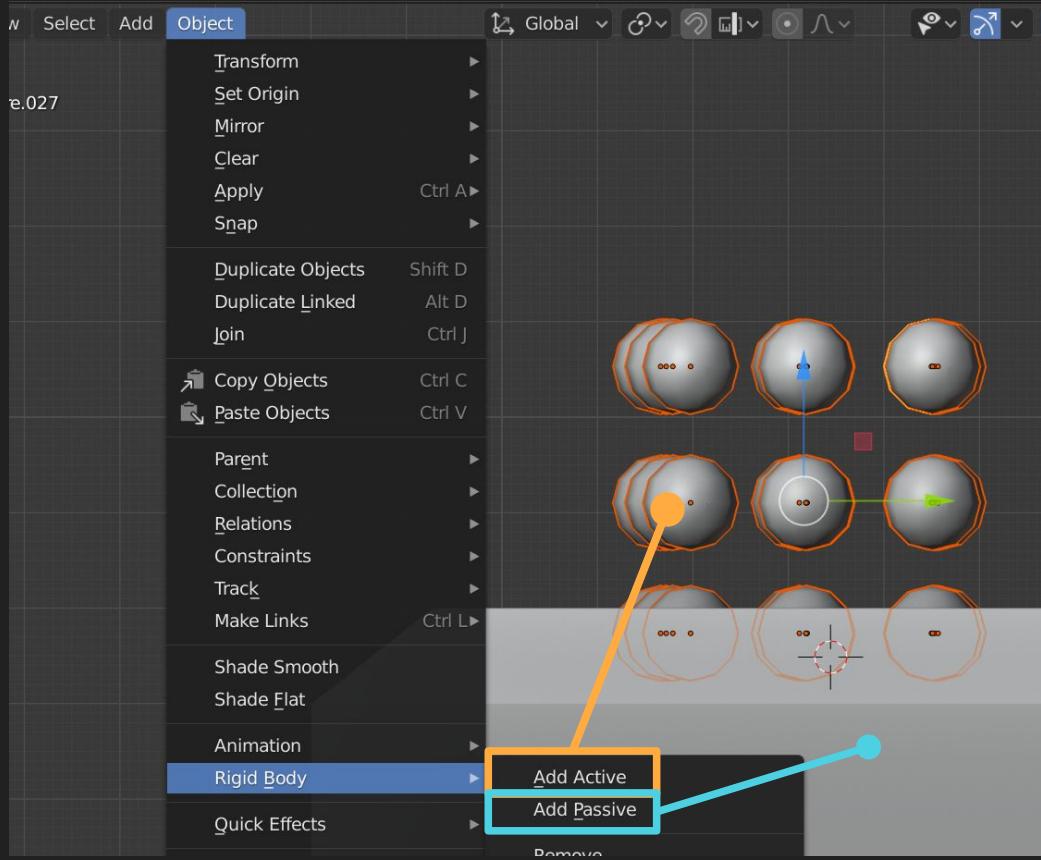
Rigid Body Physics



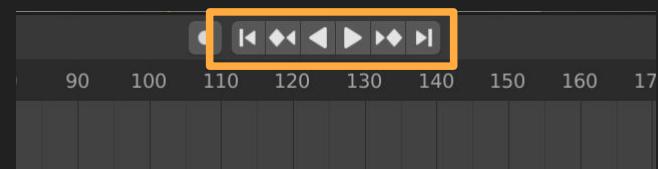
Simulare

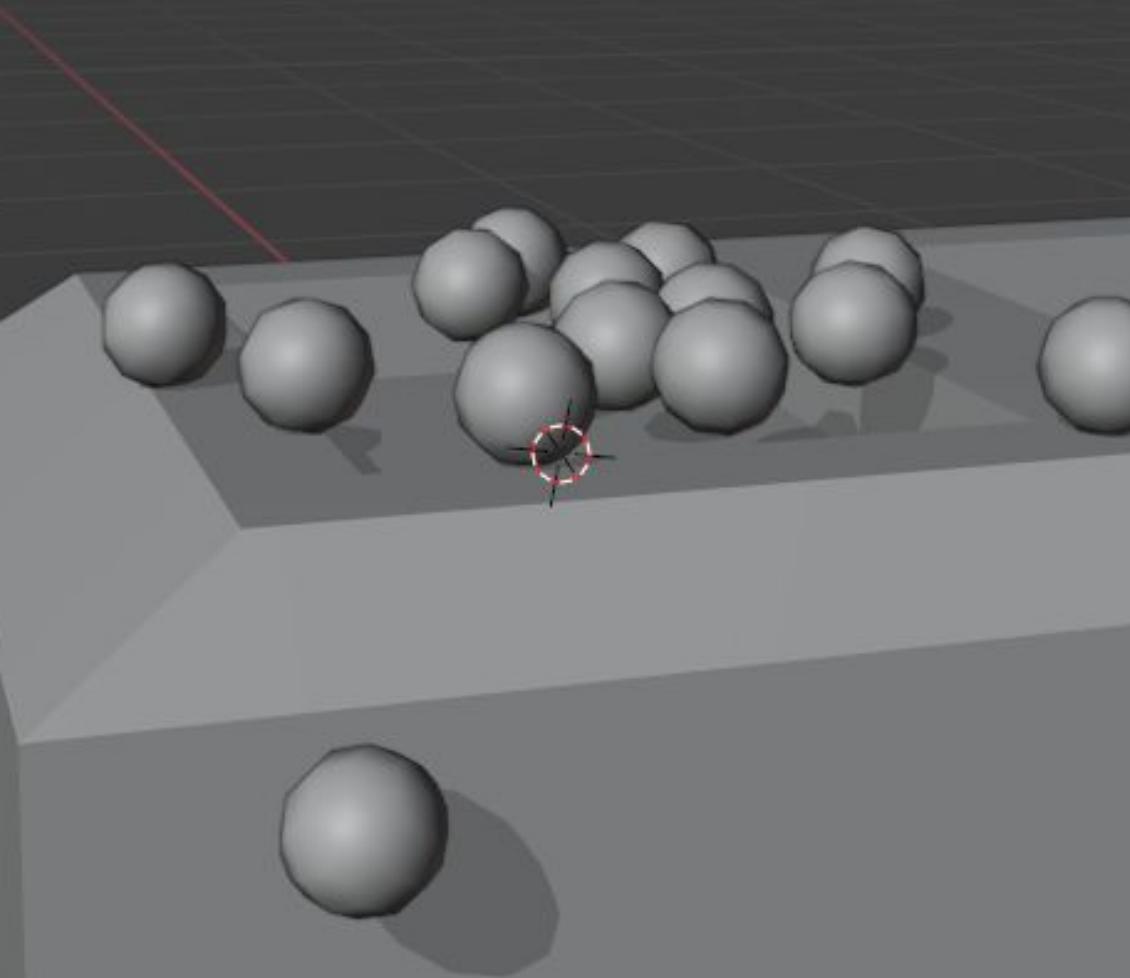


Rigid Body Physics



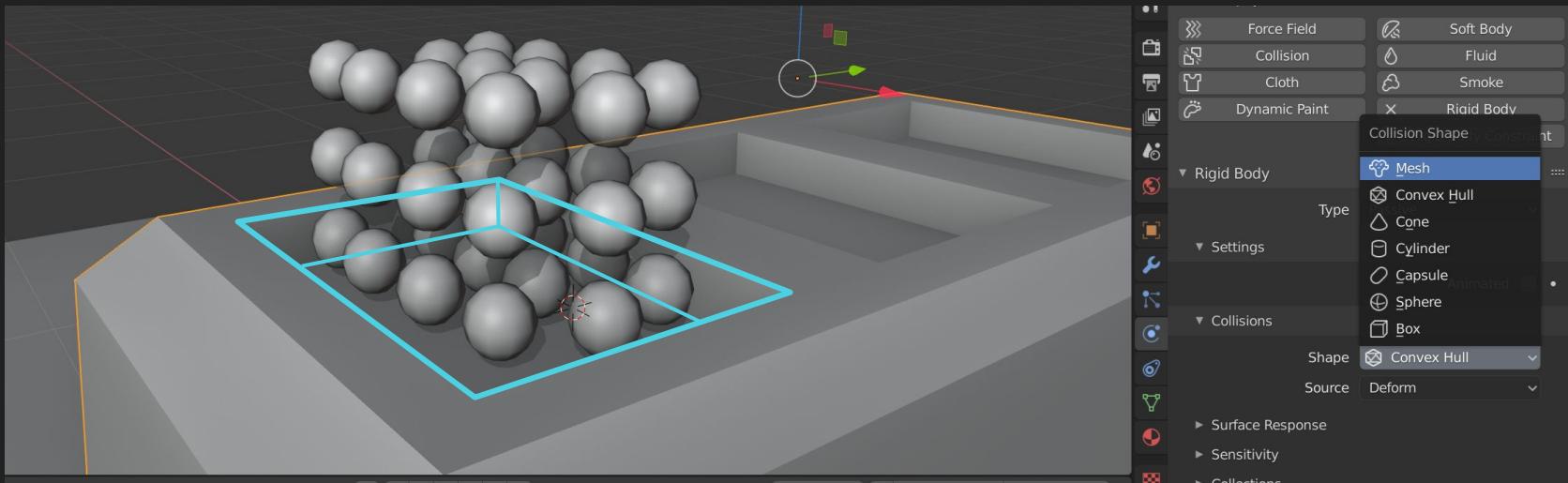
Simulare



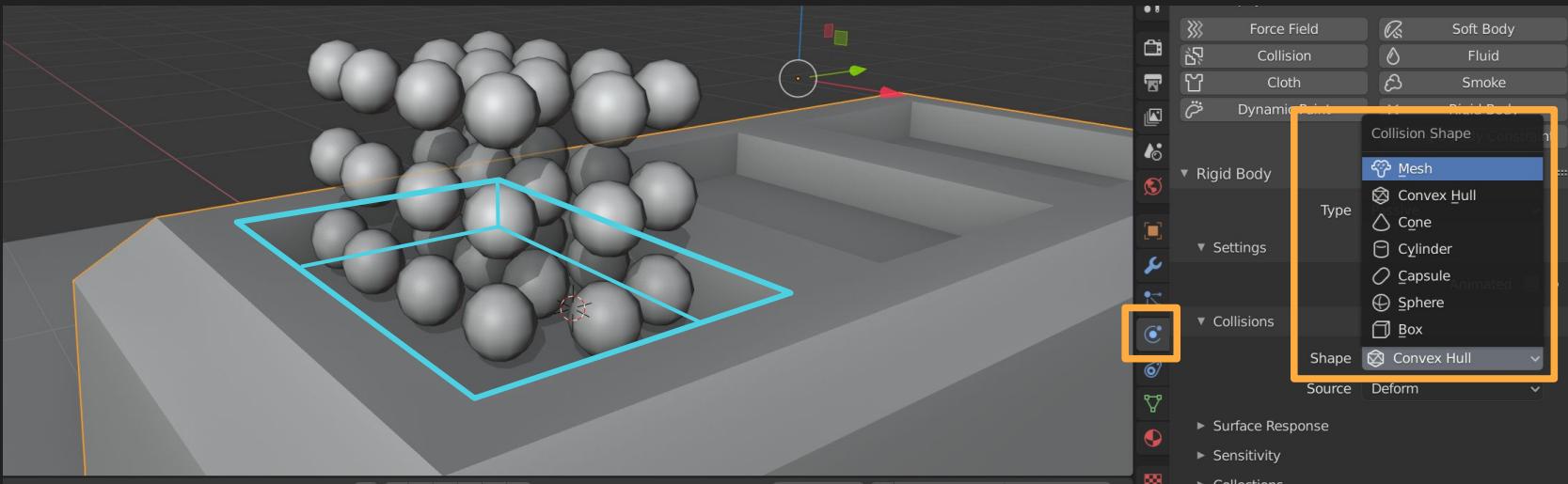


what is happening

Rigid Body Physics - Set Collision shape

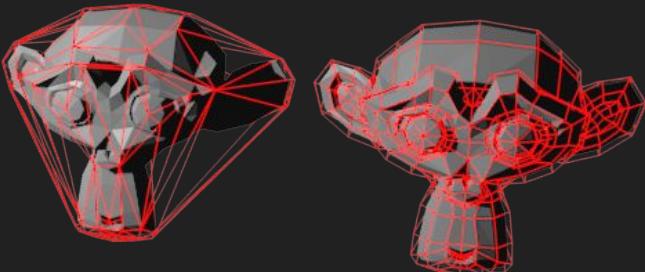


Rigid Body Physics - Set Collision shape

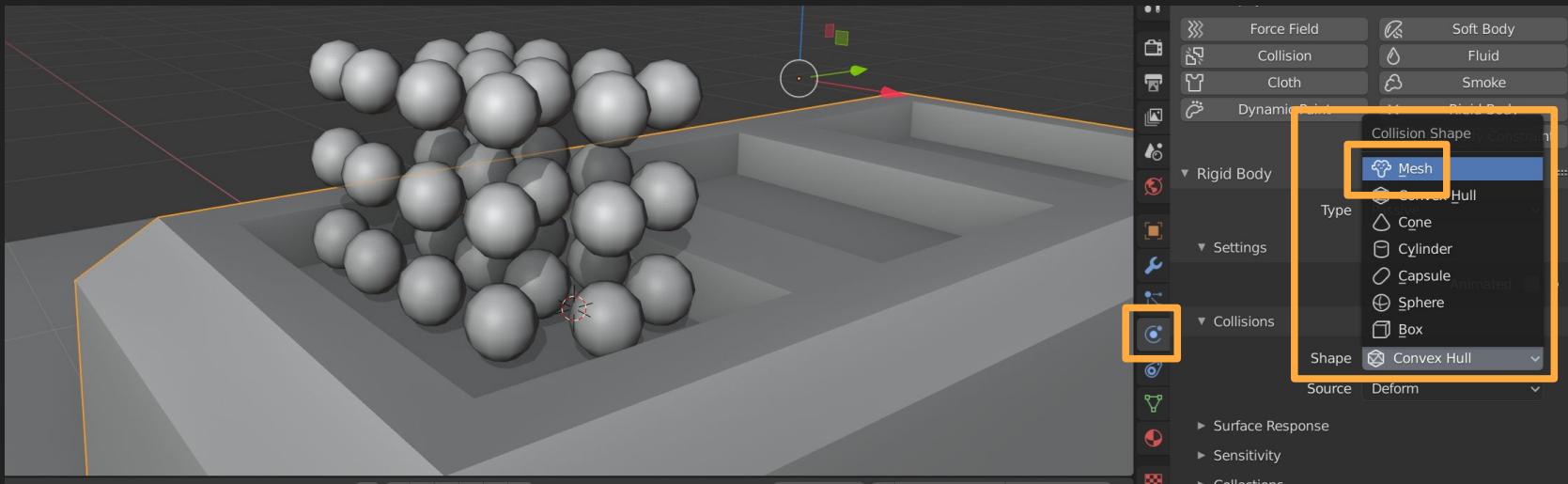


 Convex Hull

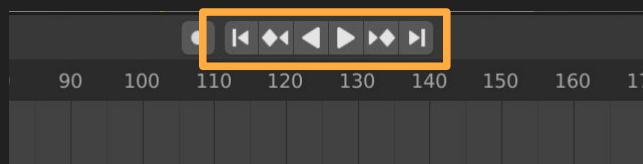
 Mesh



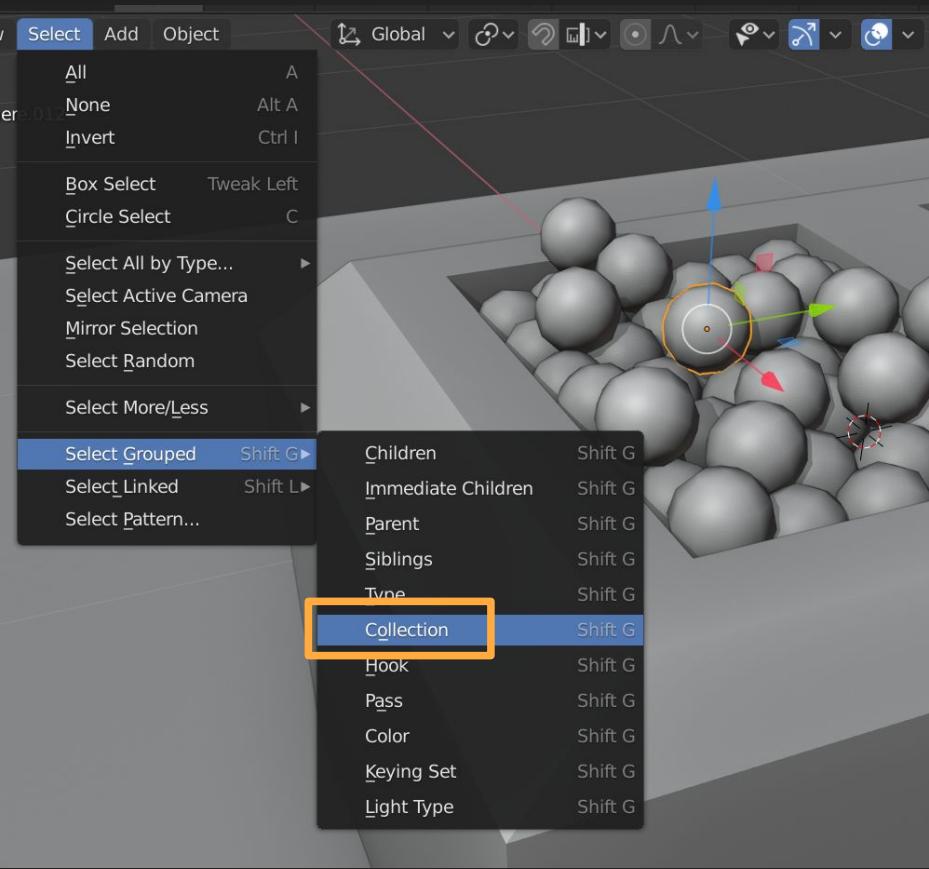
Rigid Body Physics - Set Collision shape → Mesh



Ri Simulare



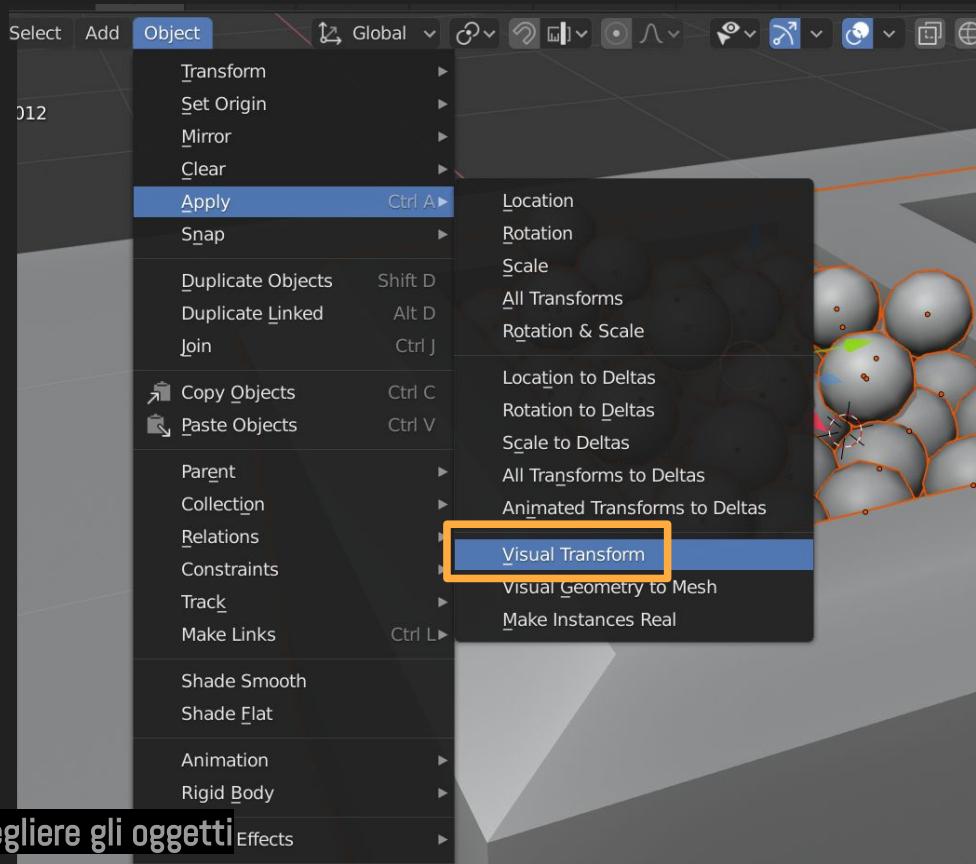
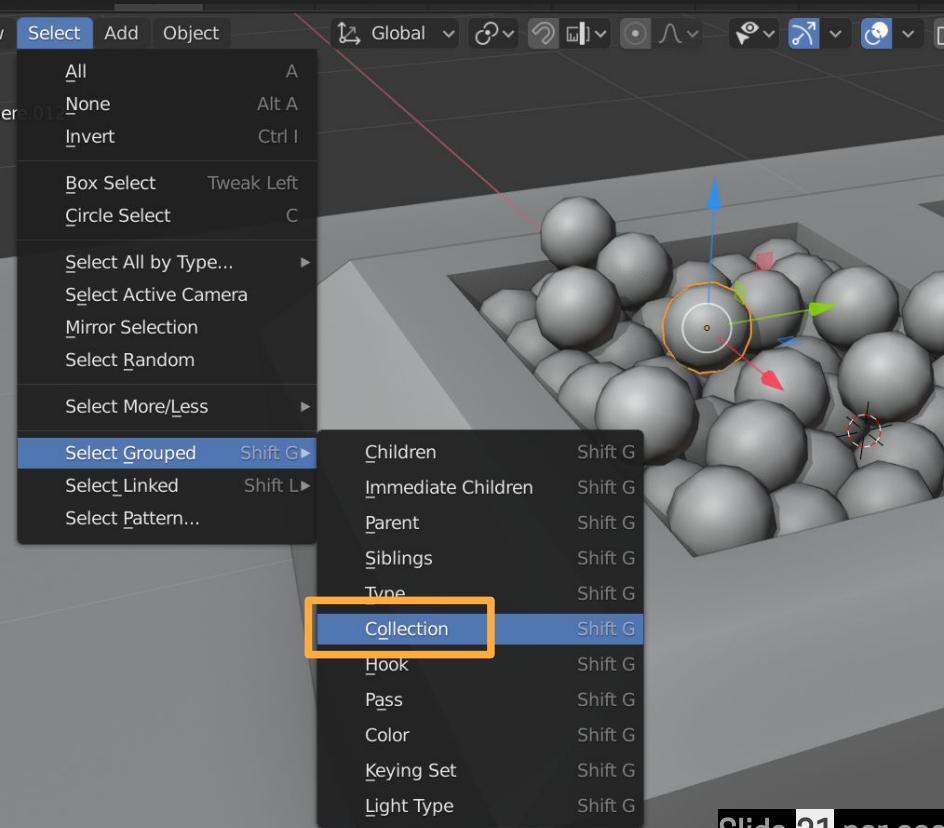
Selezionare oggetti della stessa collection (RigidBodyWorld)



Selezionare oggetti della stessa collection (RigidBodyWorld)



Fissare la simulazione Rigid Body e rimuoverla

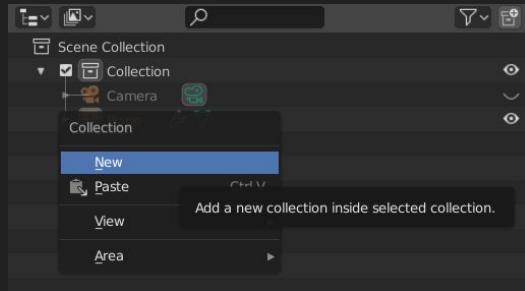




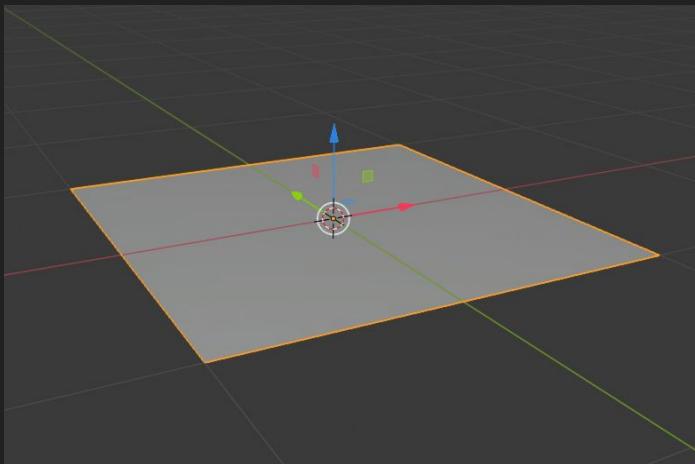
Piatti



Creiamo una nuova Collection

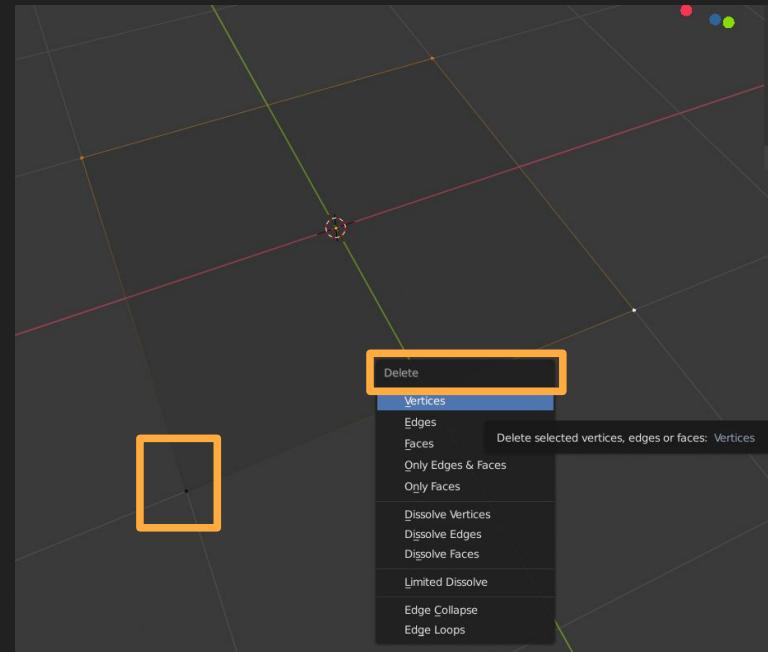


Add Plane

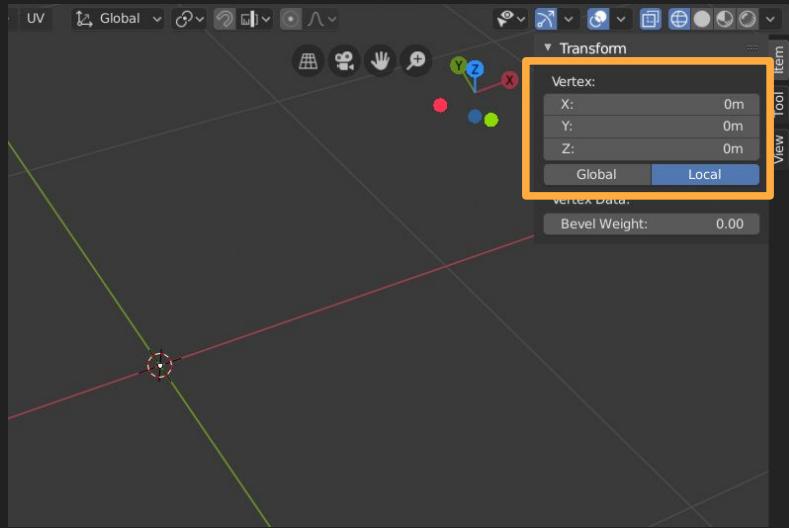


Edit Mode

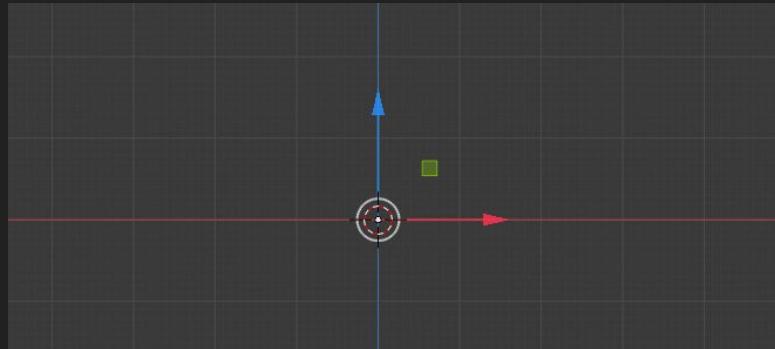
X cancelliamo 3 vertici



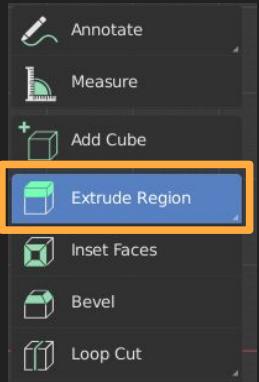
Spostiamo il vertice su [0,0,0]



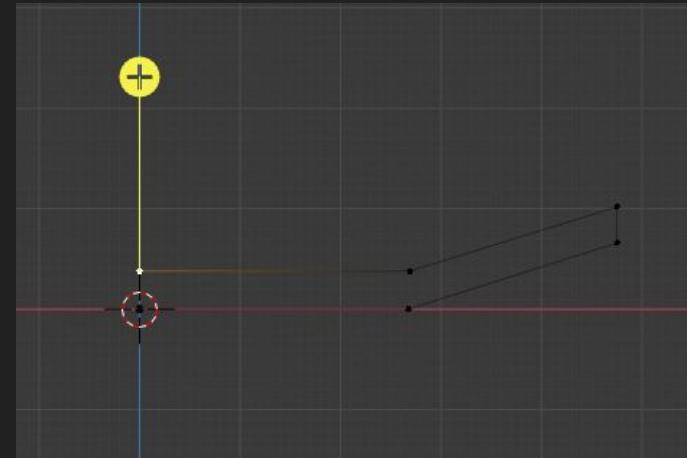
Cursor to world origin - View Front Orto 1



Extrude E → X → 0.1m



continuiamo ad estrudere per
formare $\frac{1}{2}$ profilo di un piatto

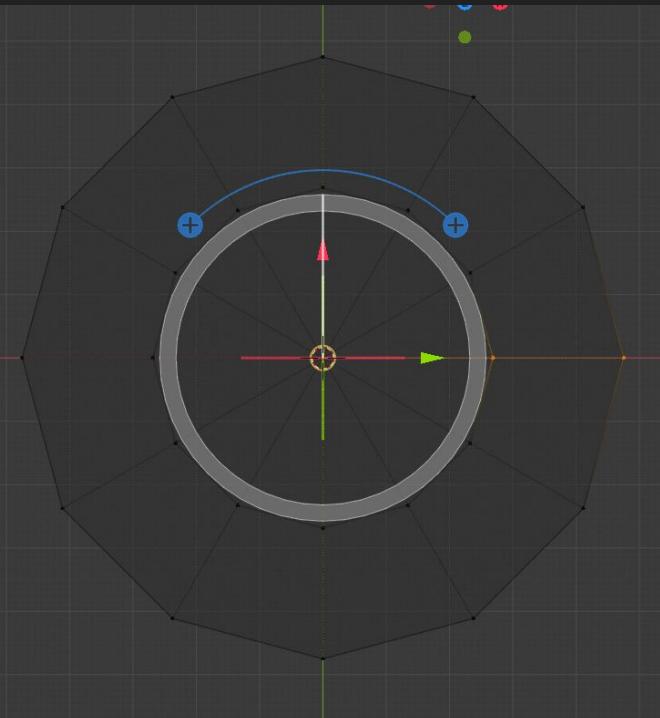
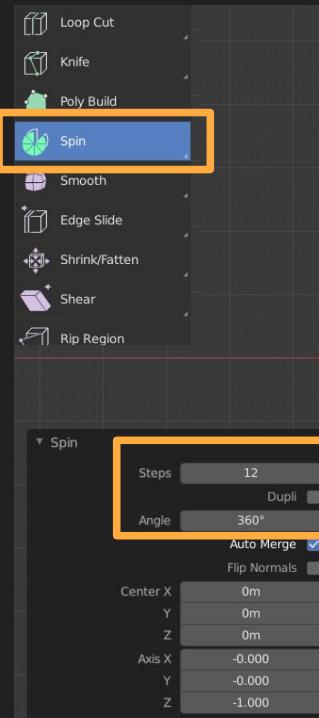


Spin con parametri Steps e Angle come in figura

Cursor to world origin

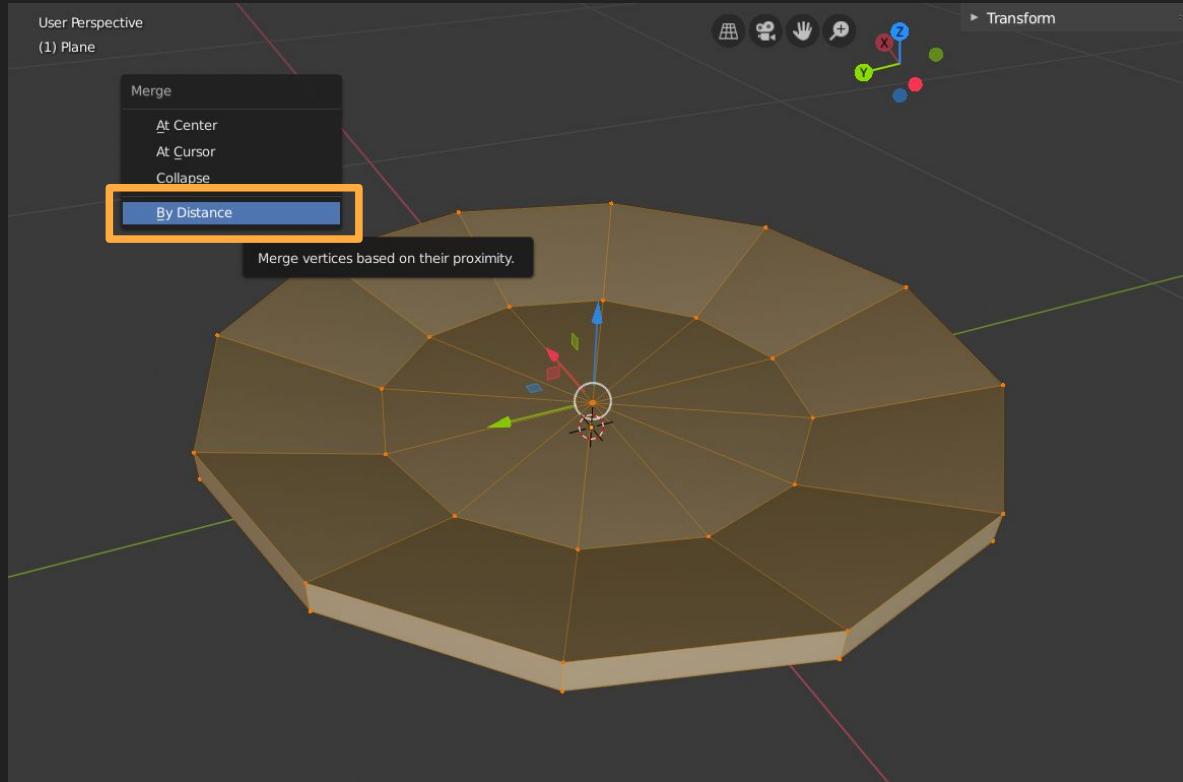
View Top Orto 7

Select all A



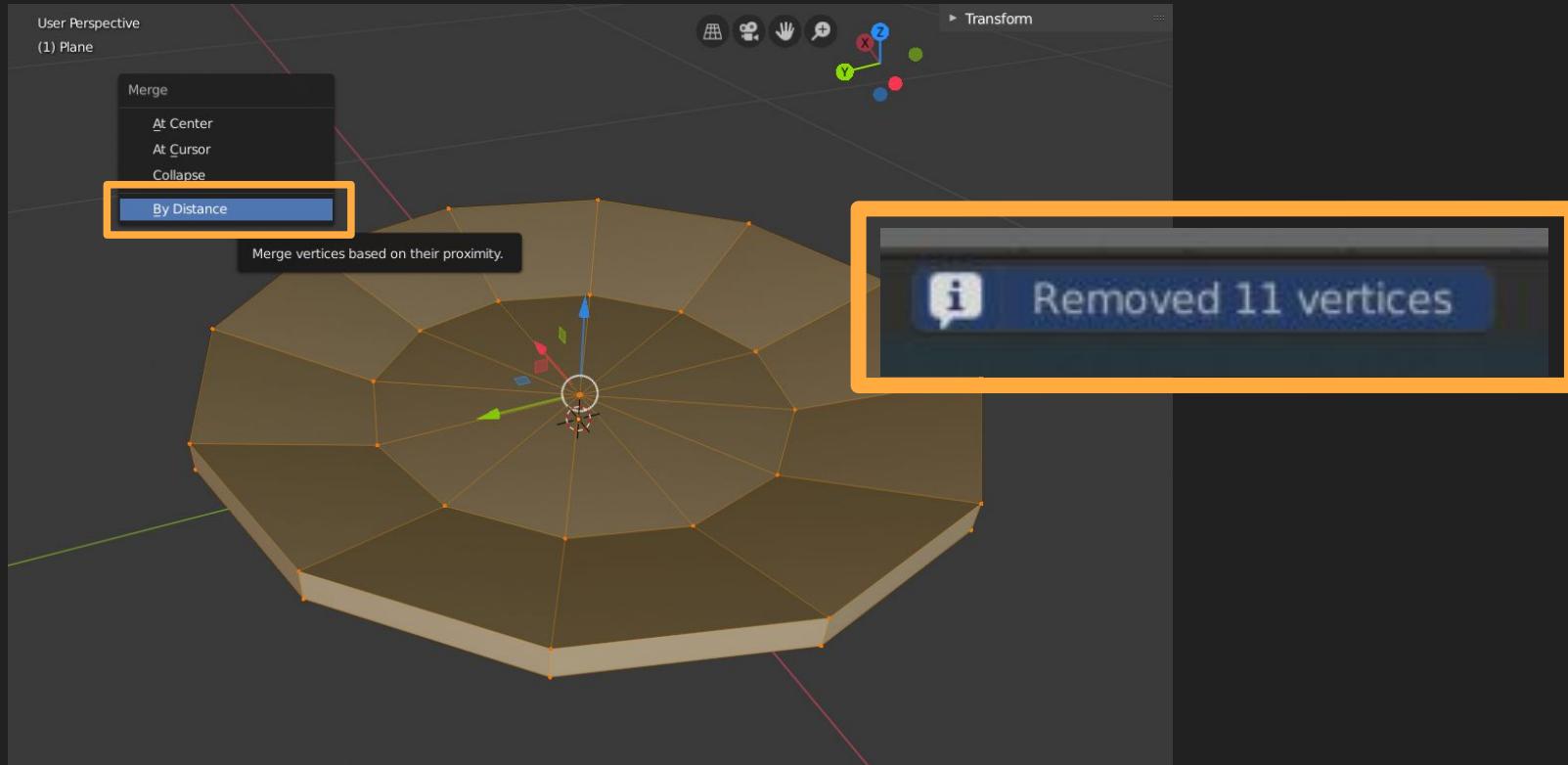
Problema: vertici doppi

Soluzione: Selezionare tutto A e M: Merge by Distance



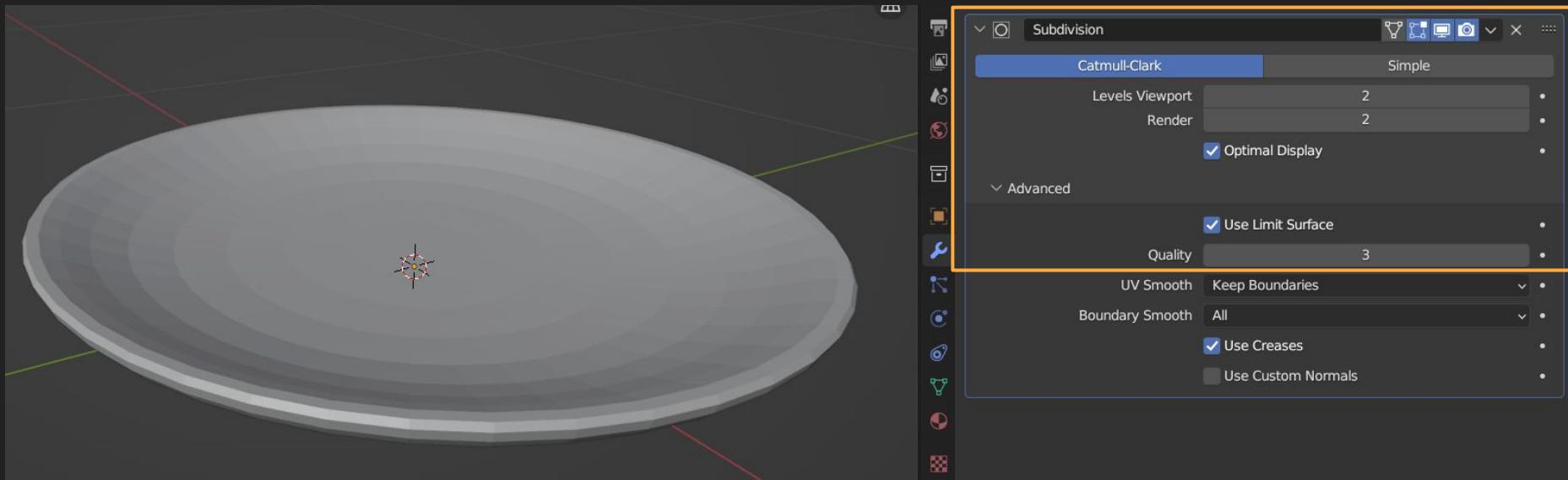
Problema: vertici doppi

Soluzione: Selezionare tutto A e Alt+M: Merge by Distance



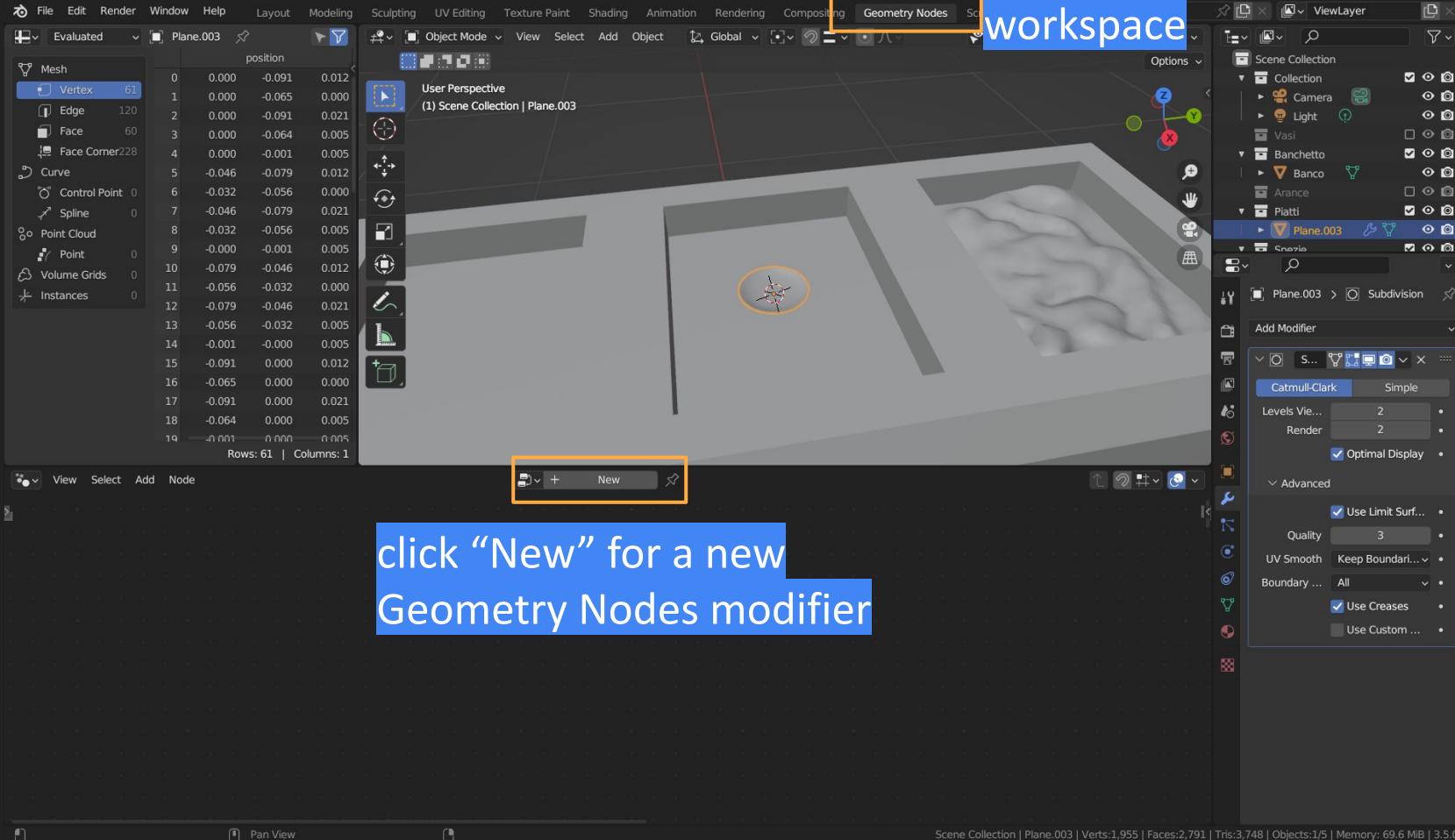
Modifiers

Subdivision Surface



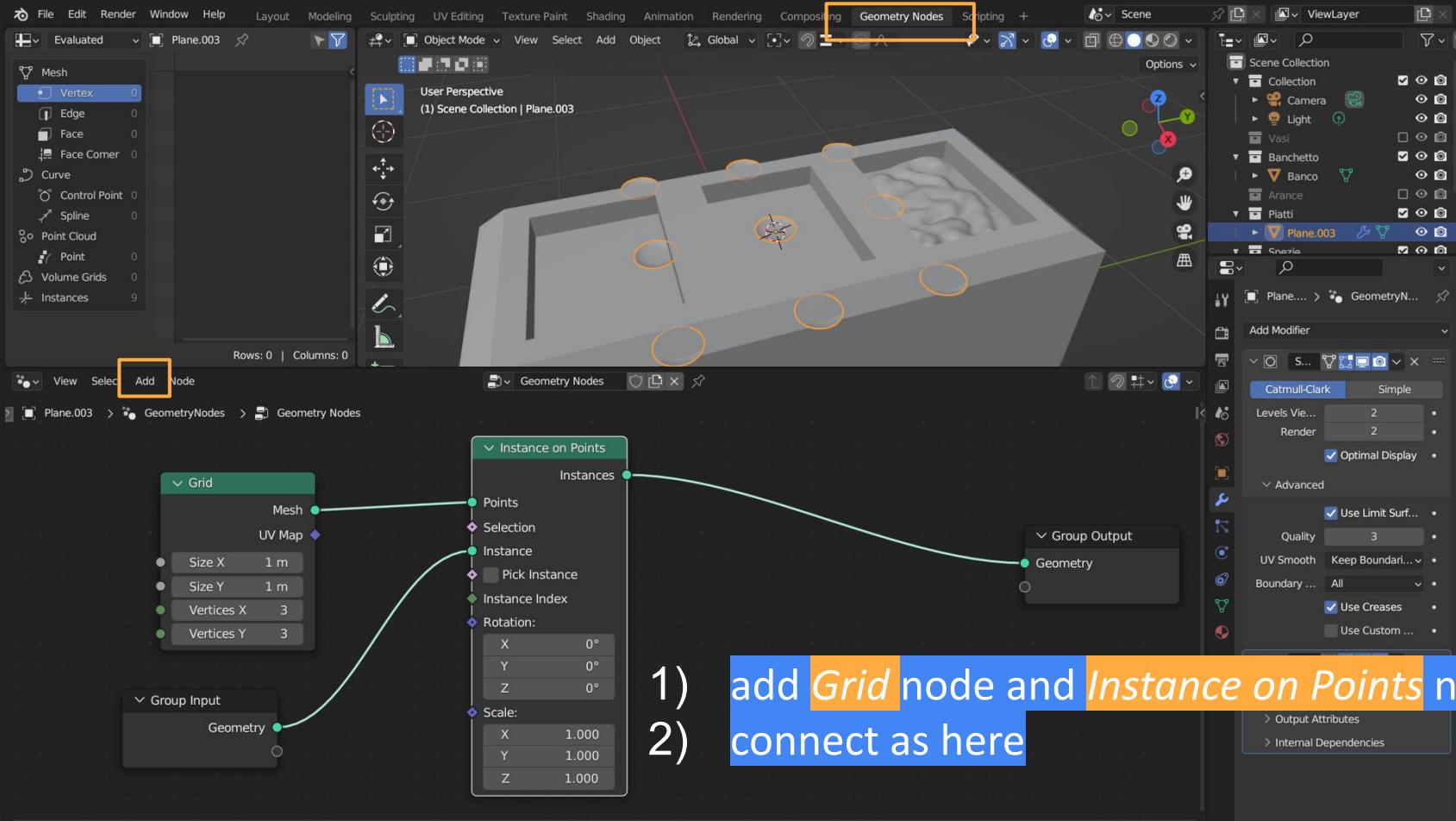
Geometry Nodes

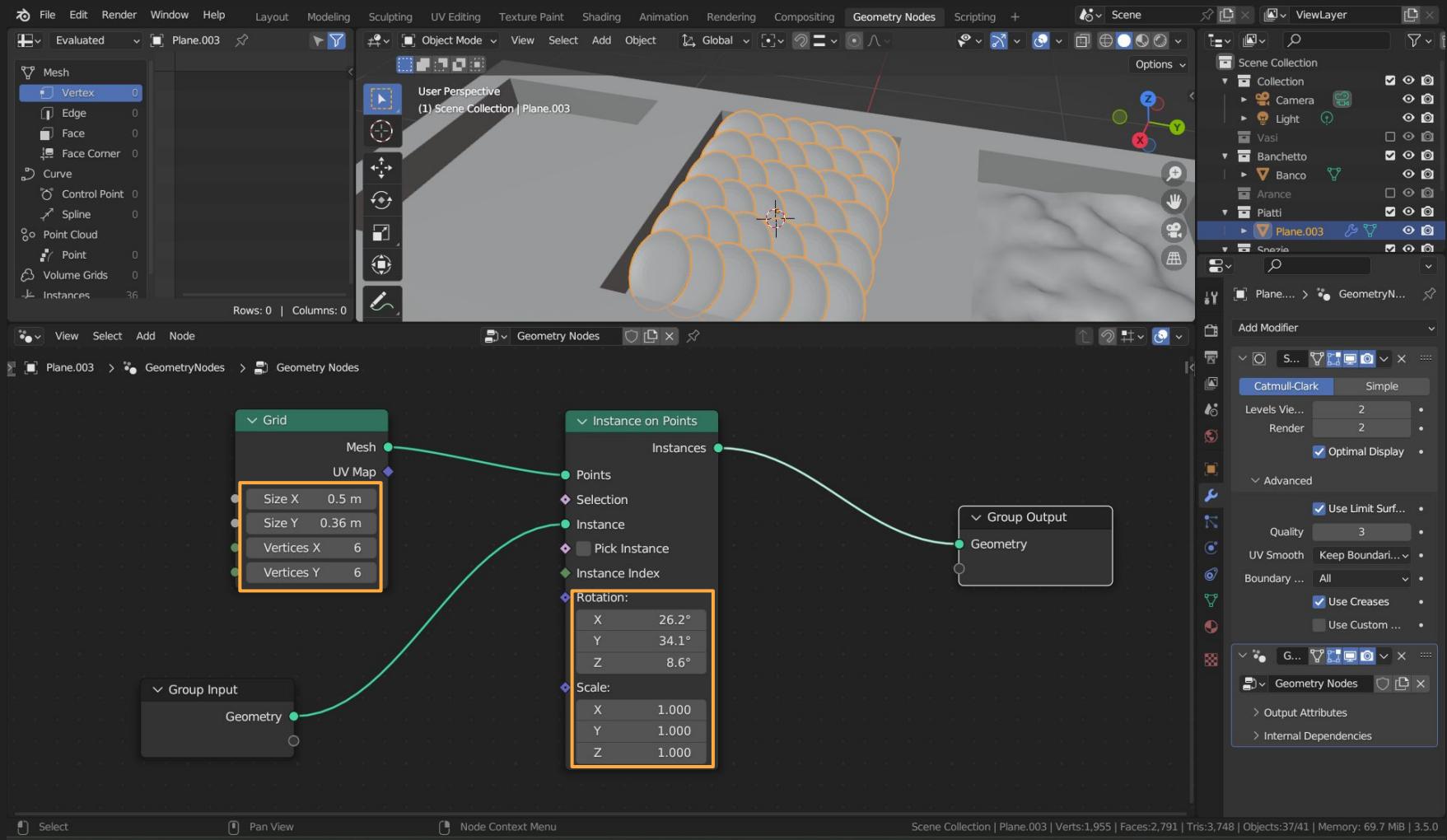
Select the geometry nodes workspace



click “New” for a new
Geometry Nodes modifier

Geometry Nodes



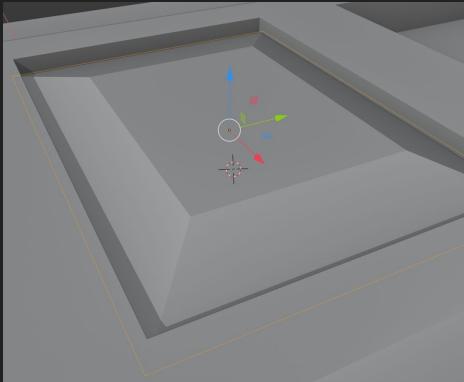


The background features a complex arrangement of overlapping triangles in shades of grey and black against a yellow-orange gradient. In the bottom left corner, there are clusters of spheres in yellow and blue.

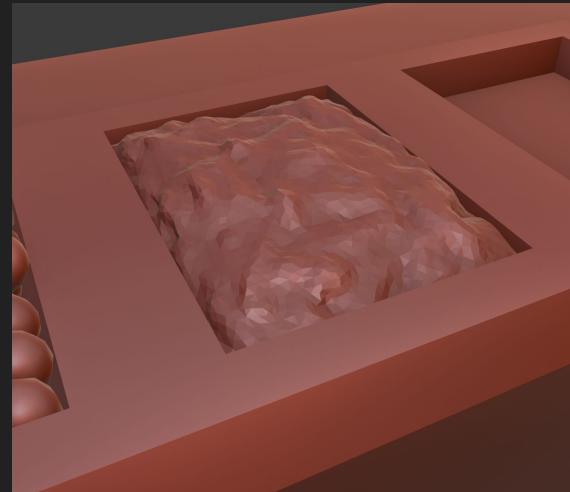
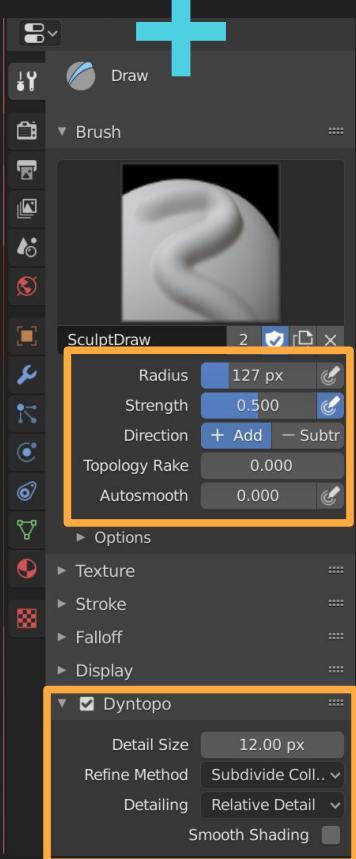
Spezie

Add Plane

Sculpt Mode

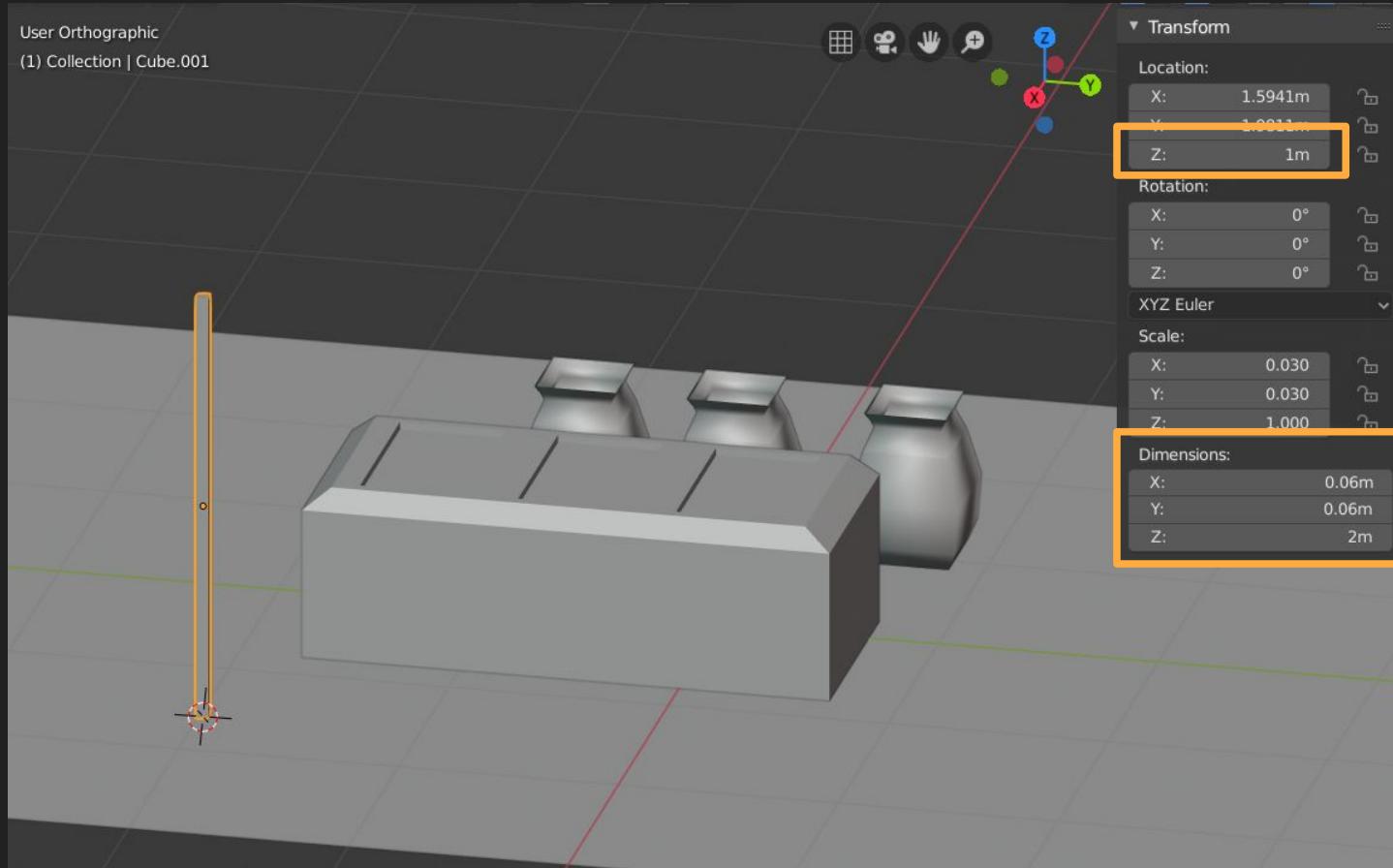


Layout Modeling Sculpting UV Editing Texture Pai



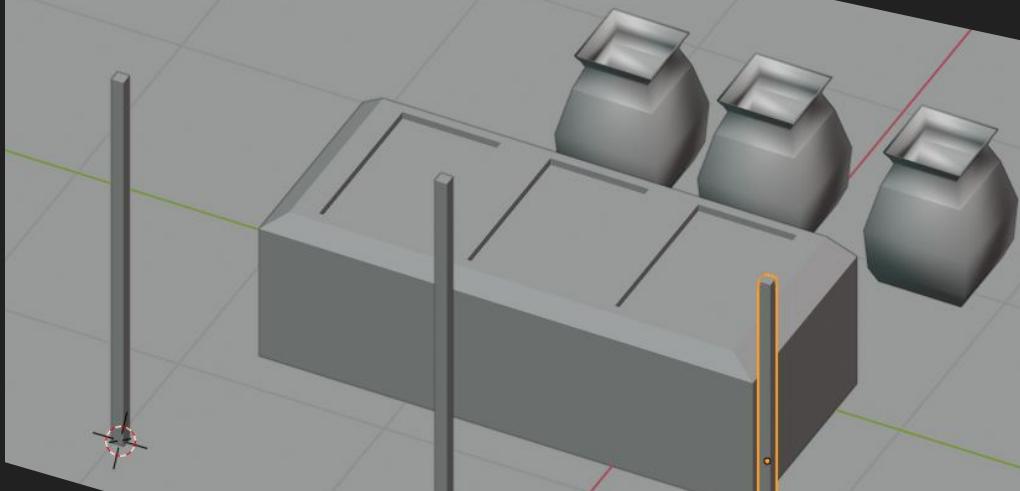


Gazebo



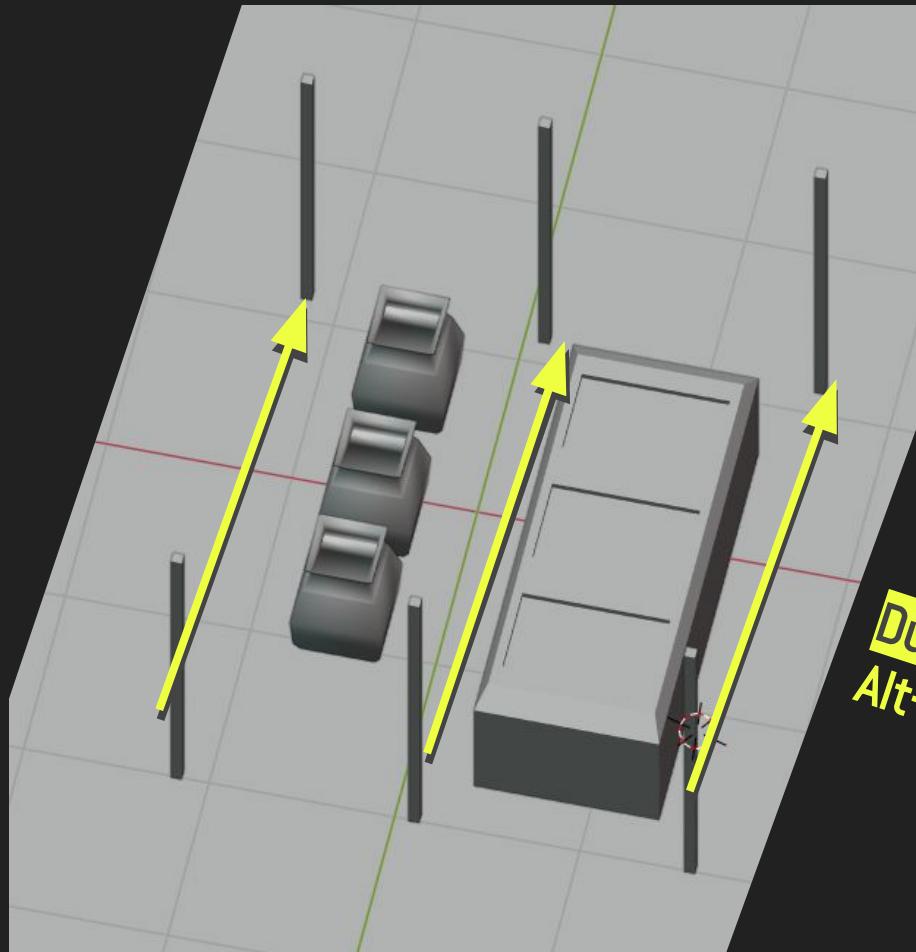
Add Cube - Dimensionare e posizionare come da immagine

User Orthographic
(1) Collection | Cube.003



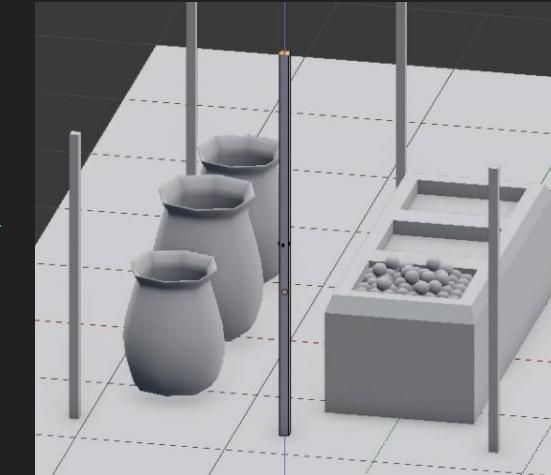
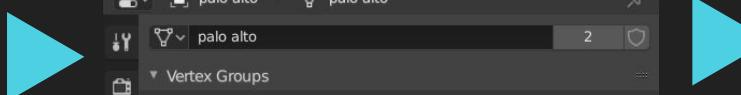
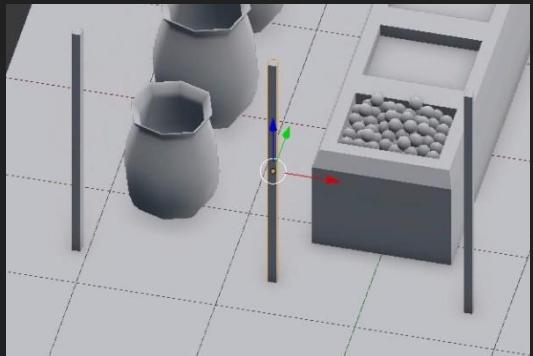
Repeat Last
Shift+R

Duplicate Linked
Alt+D (+X)

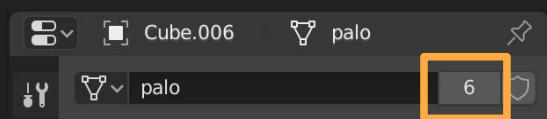


Duplicate Linked
Alt+D (+Y)

Duplicate Linked

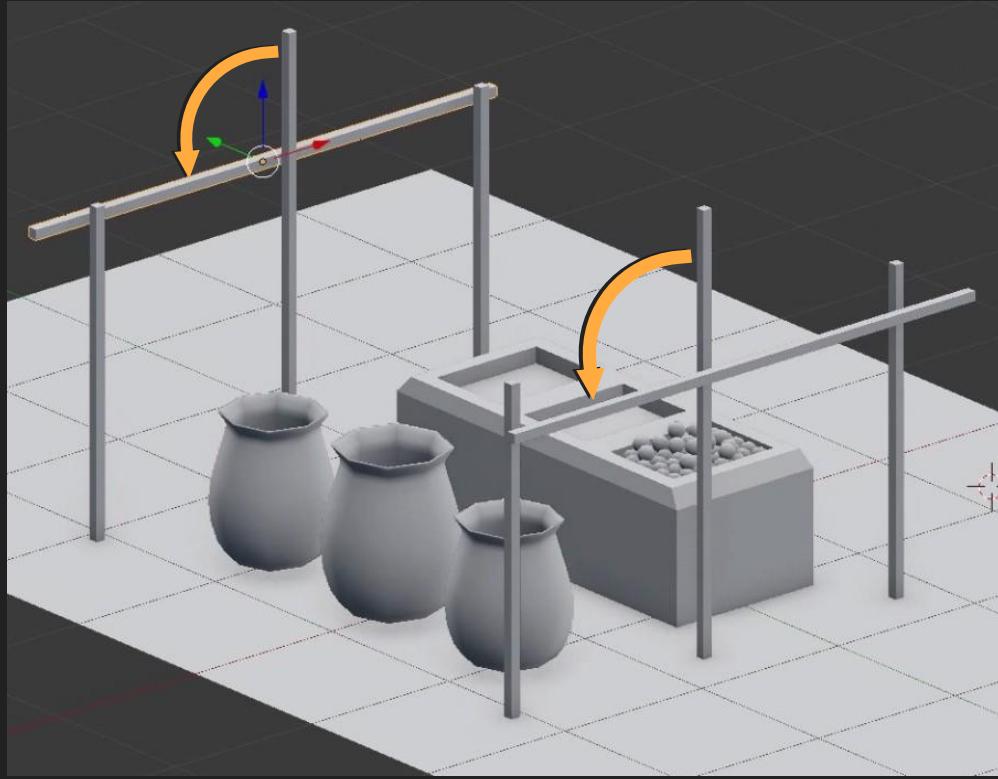


Impostare la mesh
"palo alto" ai due
pali centrali

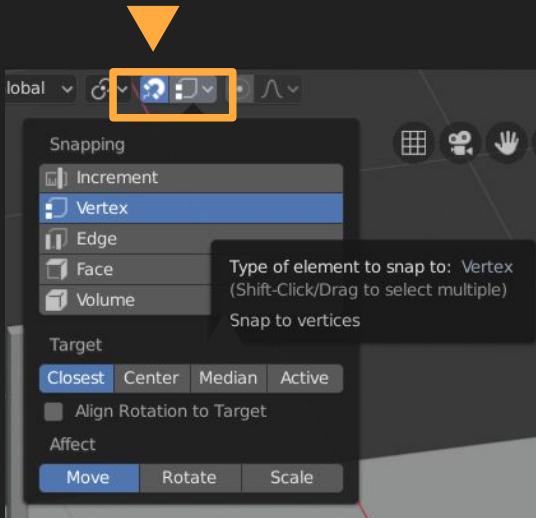


Edit Mode
Allungare il palo

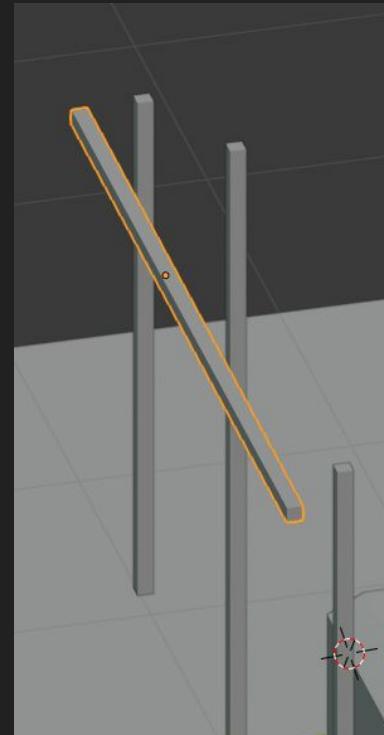
Duplicare i palo_alto Shift + D (+ ESC)
ruotare i nuovi pali di 90° R + Y + 90
allungarli in **Edit Mode**



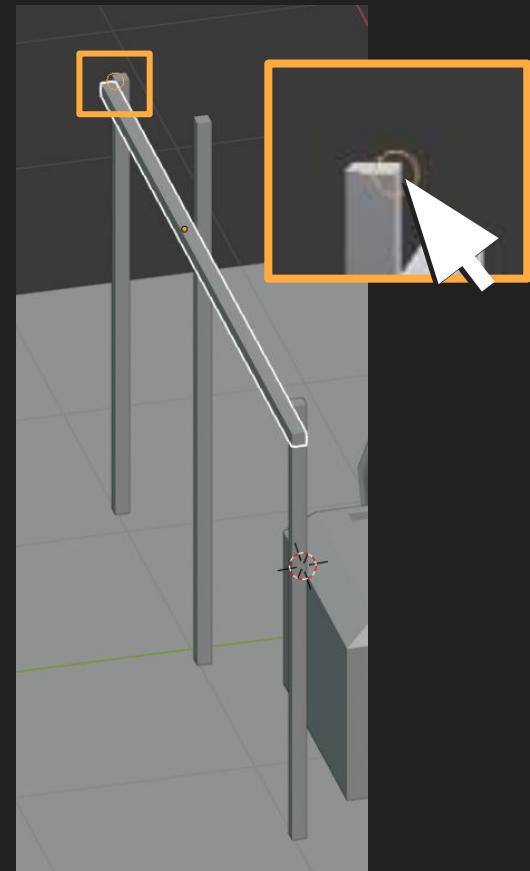
Selezionare la
calamita per
abilitare lo Snap



Snap



Spostare il palo...
G + Y



Impostare la
modalità di snap
"ai vertici"

...muovendo il
mouse su un vertice

Il vostro turno

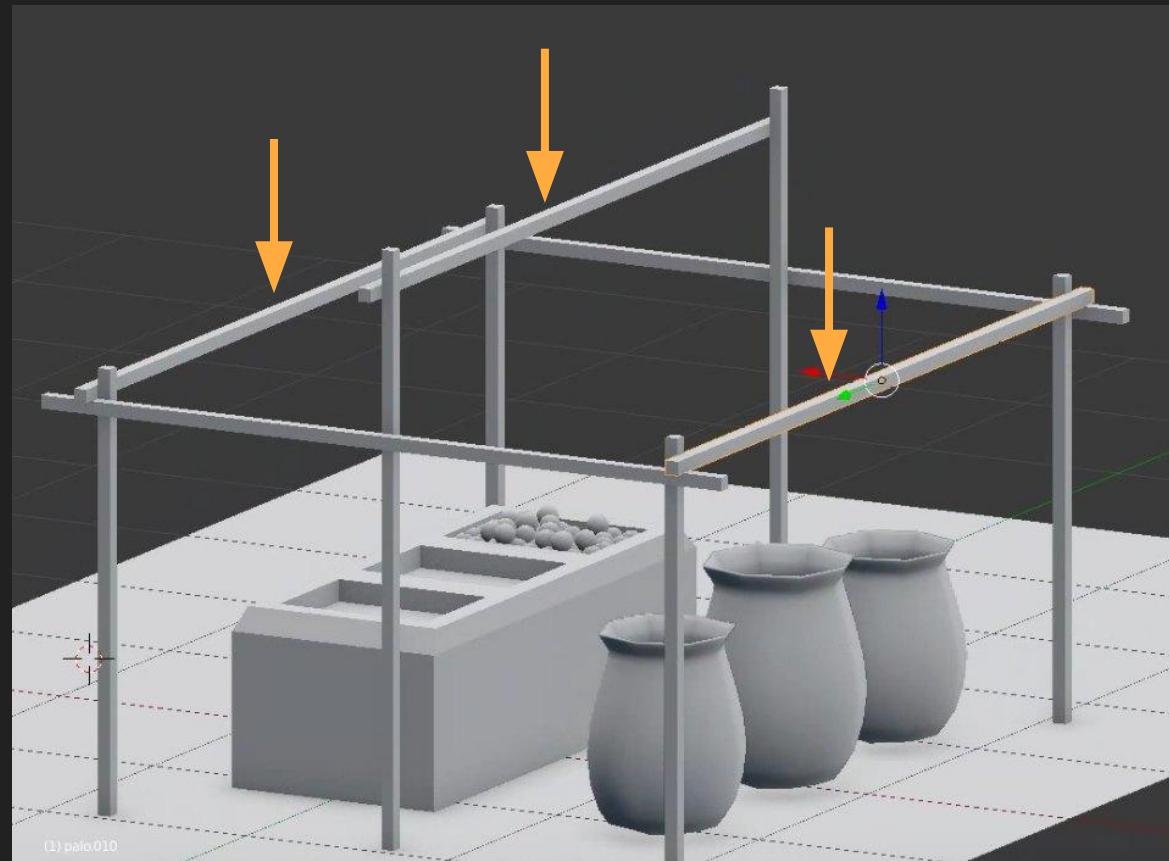
Posizionare **G + X/Y/Z**

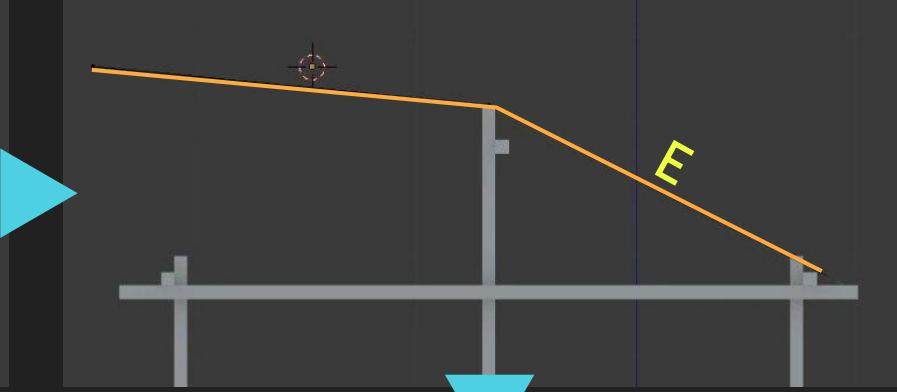
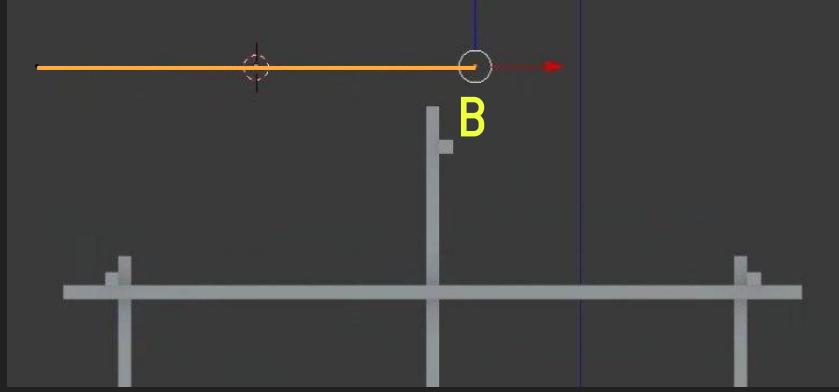
Ruotare **R + X/Y/Z + 90**

Duplicare **Shift + D**

Snap **G + Ctrl**

Modificare **Edit Mode**





Posizionare **G + X/Y/Z**

Ruotare **R + X/Y/Z + 90**

Duplicare **Shift + D**

Snap **G + Ctrl**

Modificare **Edit Mode**

Selezionare **B**

Estrudere **E (+ X/Y/Z)**

Posizionare **G + X/Y/Z**

Ruotare **R + X/Y/Z + 90**

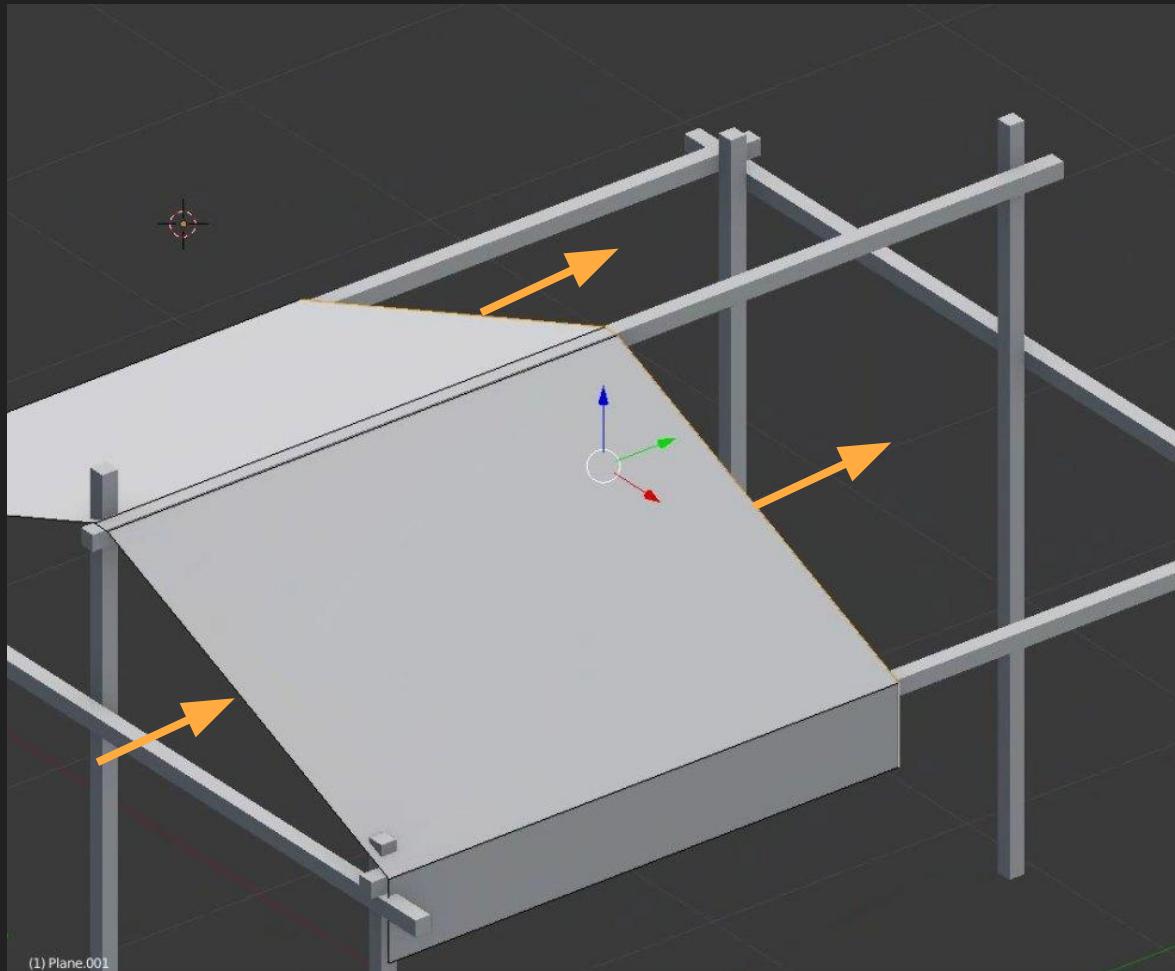
Duplicare **Shift + D**

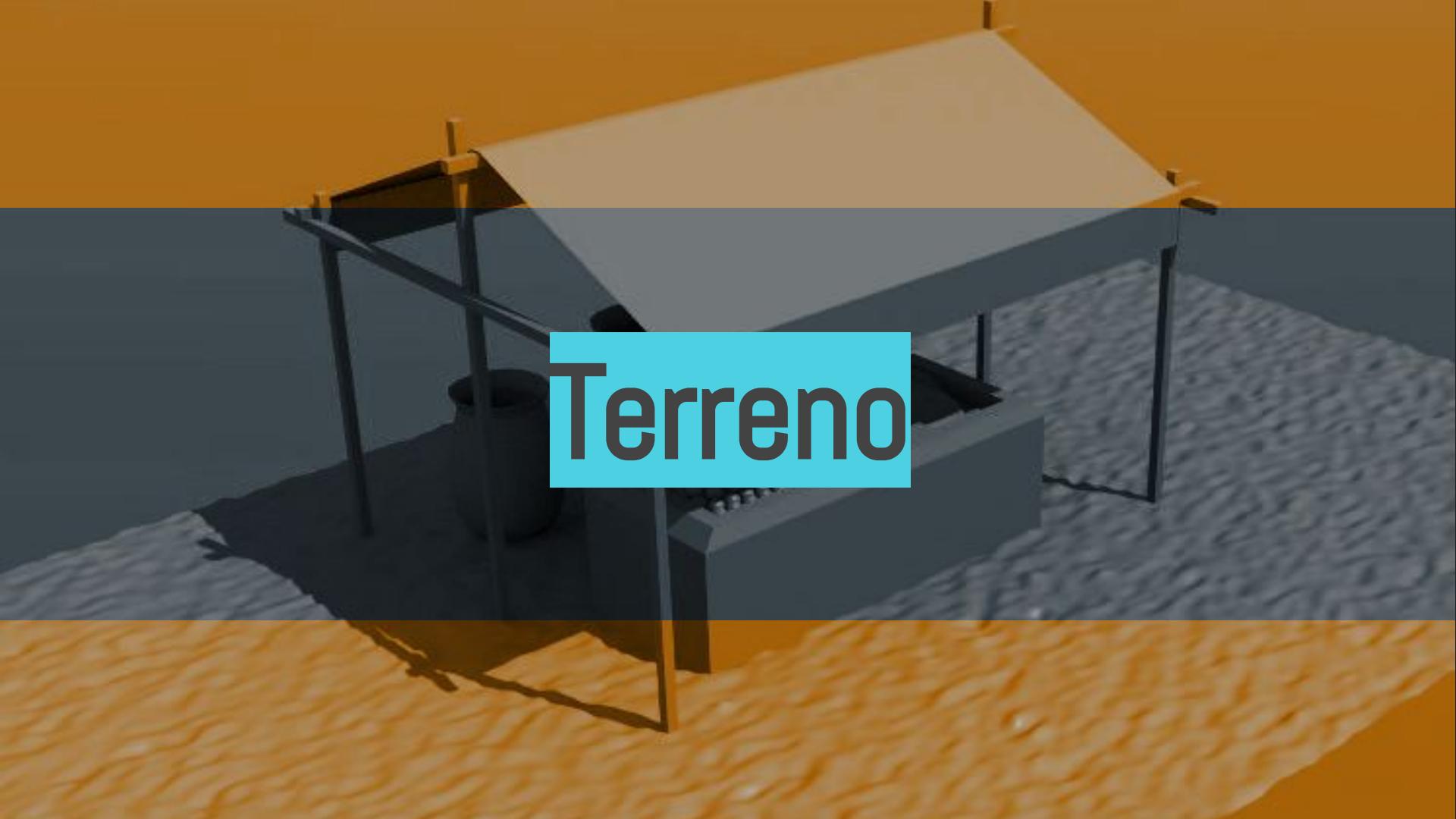
Snap **G + Ctrl**

Modificare **Edit Mode**

Selezionare **B**

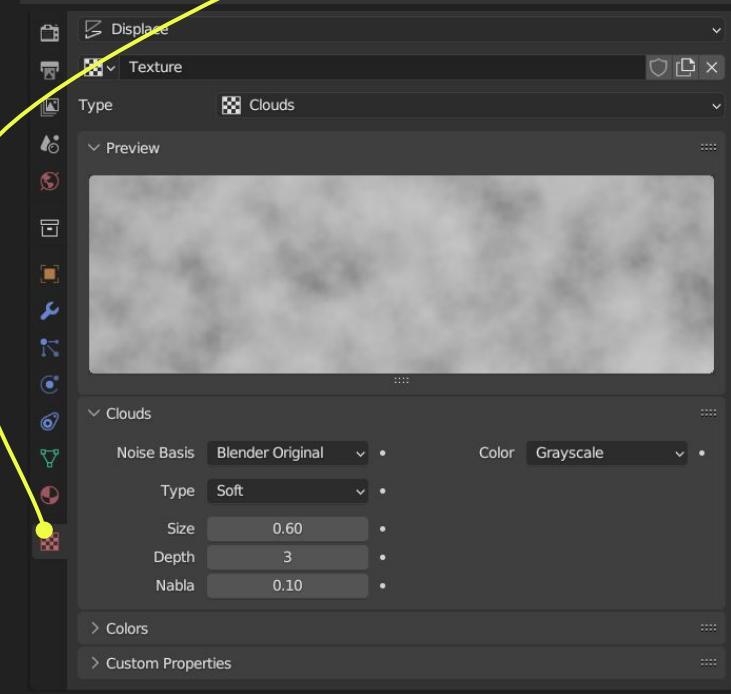
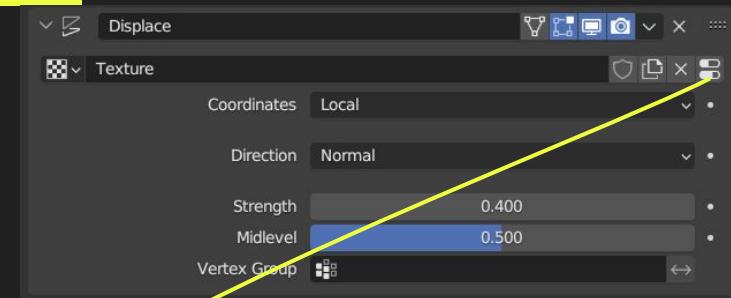
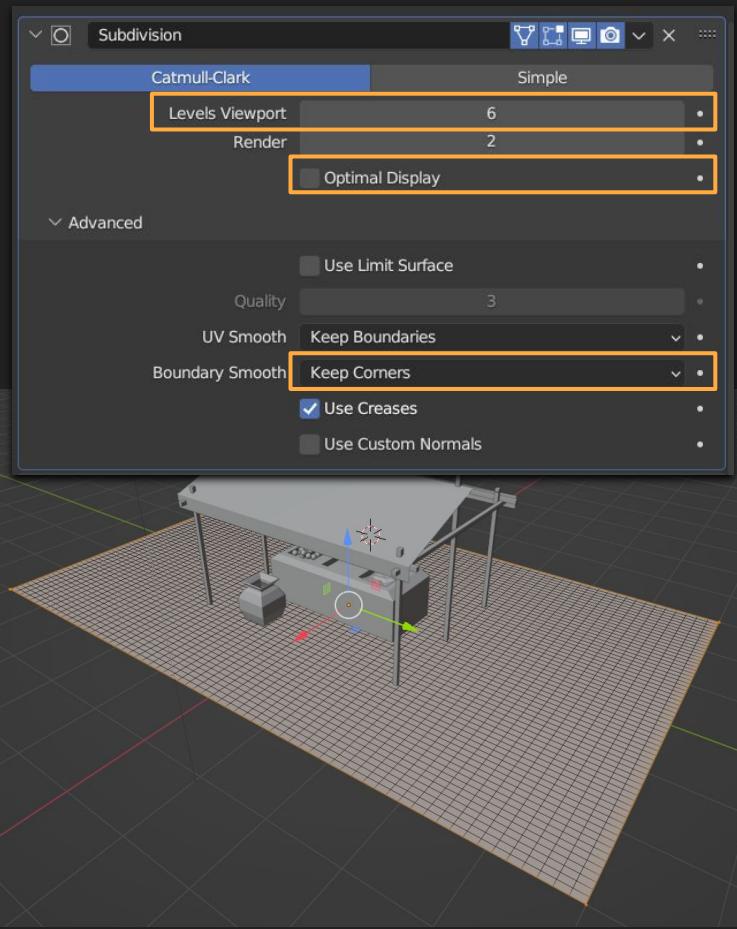
Estrudere **E (+ X/Y/Z)**



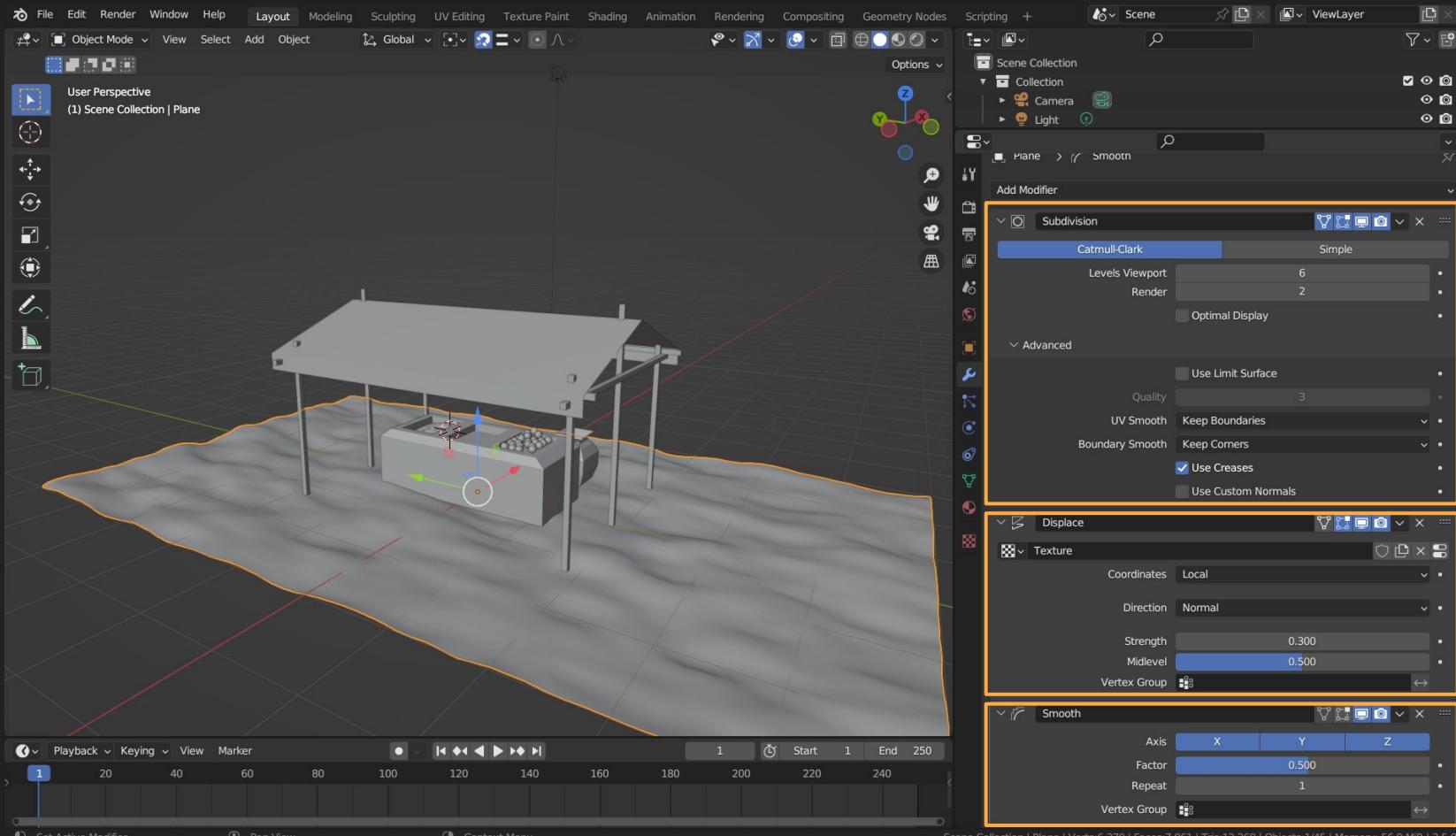


Terreno

Displace



Displace



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PolygonIsland](#)



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and other [CG Matter](#) [CG Geek](#) [Bad Normals](#) [Ducky 3D](#) [Curtis Holt](#)



Grazie per la
vostra attenzione

Domande?