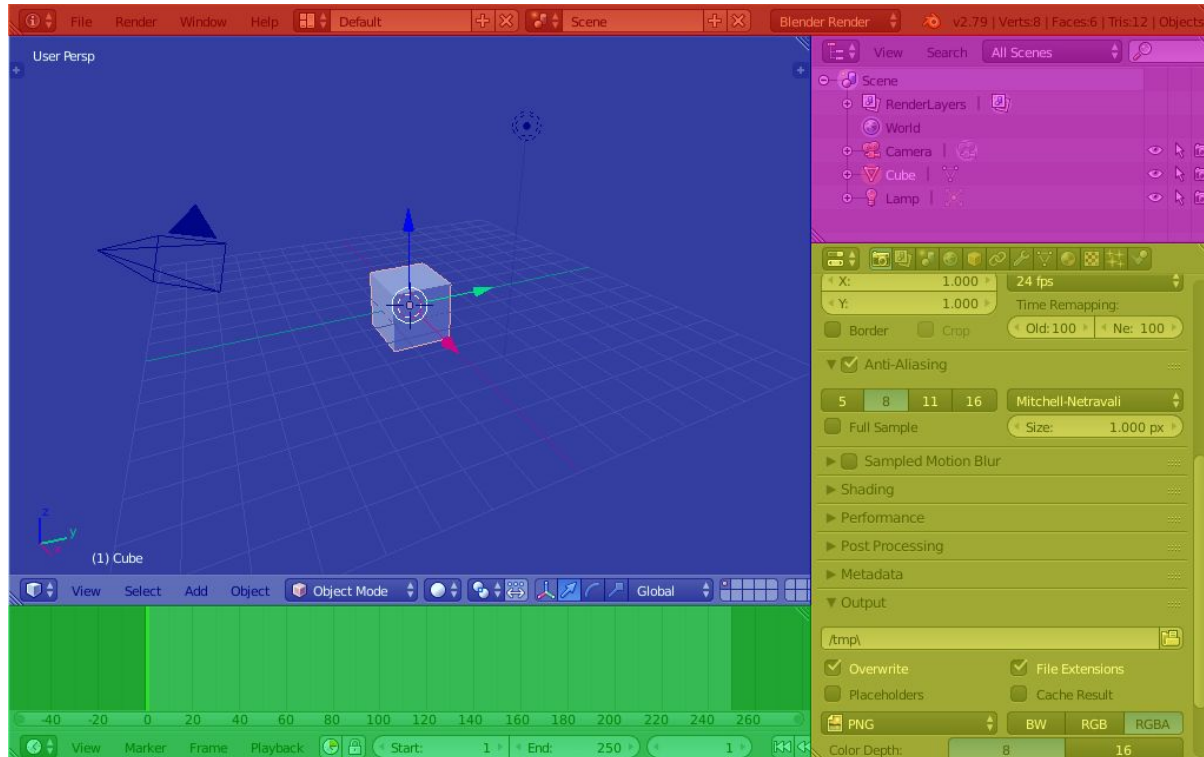# 1. intro

After it finishes loading, click anywhere inside Blender window, so the splash screen disappears. After that, you will probably see something like this.

This is default window layout (color-coded for illustrative purposes). Each of those colored rectangles is a different **editor**. Blue area is **3d viewport** (the biggest of five rectangles, the one with cube and grid floor), and that's all you need to know about editors for now.
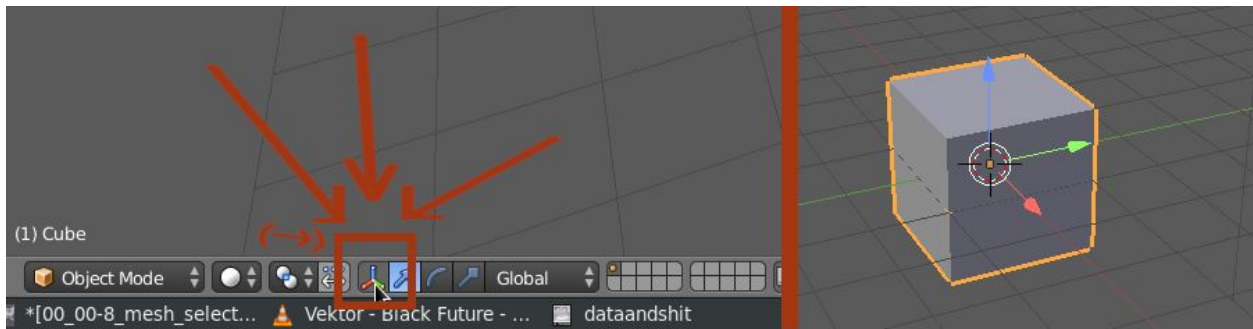
Before anything else, two things.

First, the second most important one. You don't need this many buttons and whatnot. So.

> While **cursor is inside the 3d viewport,**
> `shift + space` = fullscreen or unfullscreen back, works for any editor the cursor points to
> `N` = show/hide N-panel
> `T` = show/hide T-panel

Yeah, that's how these panels are called. You have both of them in most editors. Anyway, just hide them. (they are already hidden on the above picture)

Second, the first most important thing. That's right. Set teh focken **transformation widget** invisible. No one needs it in 2018.

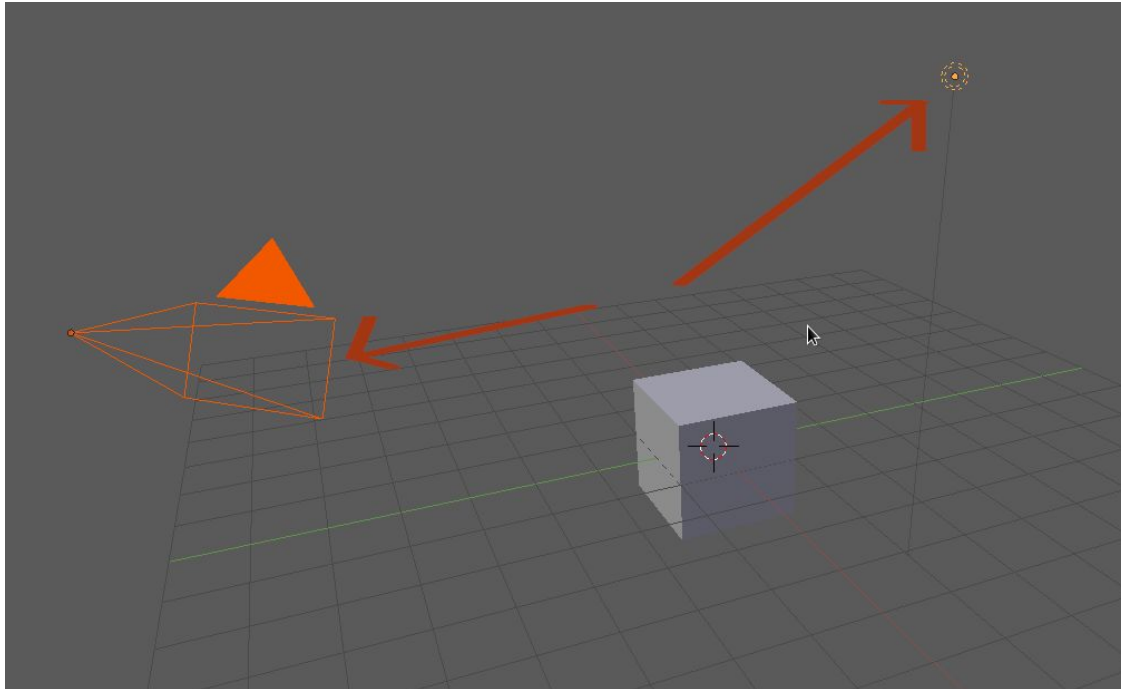Click **this button** , or press **Ctrl + Space** to hide/show the widget.

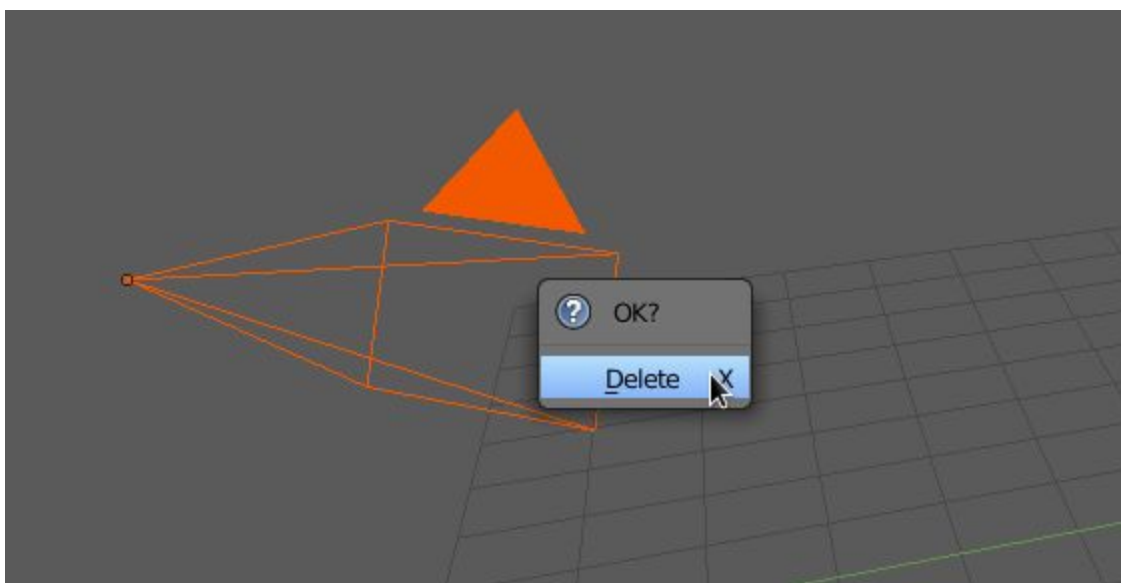More screen space, less distraction.

Navigation in 3d space:

> **scroll mouse wheel** - **zoom in/out**
> hold **scroll wheel** + drag the maus aroond - **rotate the view**
> hold **shift** + drag the maus = **pan the view**
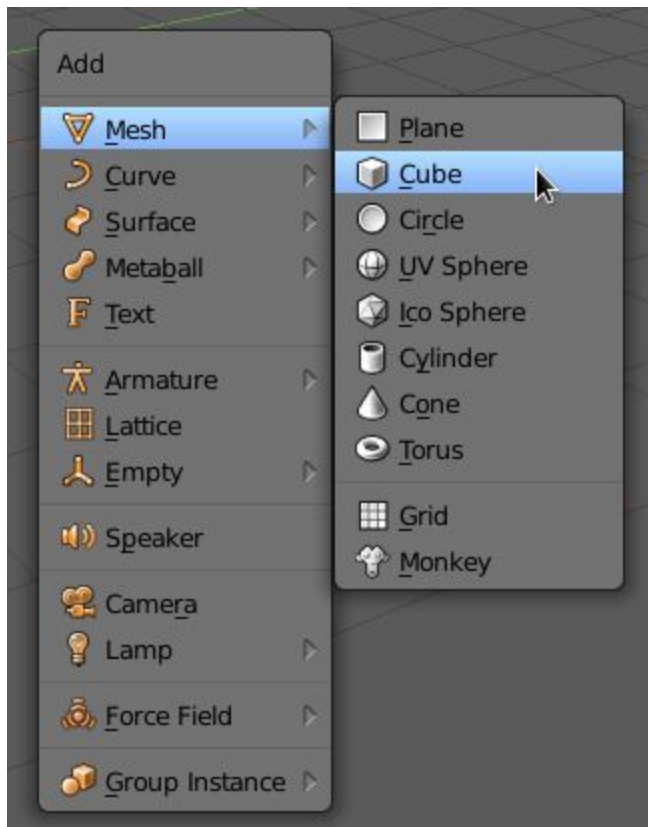
More about navigation is in part 3 of this tutorial.

Manipulating objects inside the scene:

> **right click** = select an object
> **rightclicking** while holding **shift** = select multiple objects
> select the **camera** and the **point light**
> then press **X**
> then inside confirmation pop-up - **left mouse button**, **X**, or **enter** to **delete them**

> select the cube
> look at it
> wow, that's a cool cube
> delete it

> Shift + A calls the **Add** menu
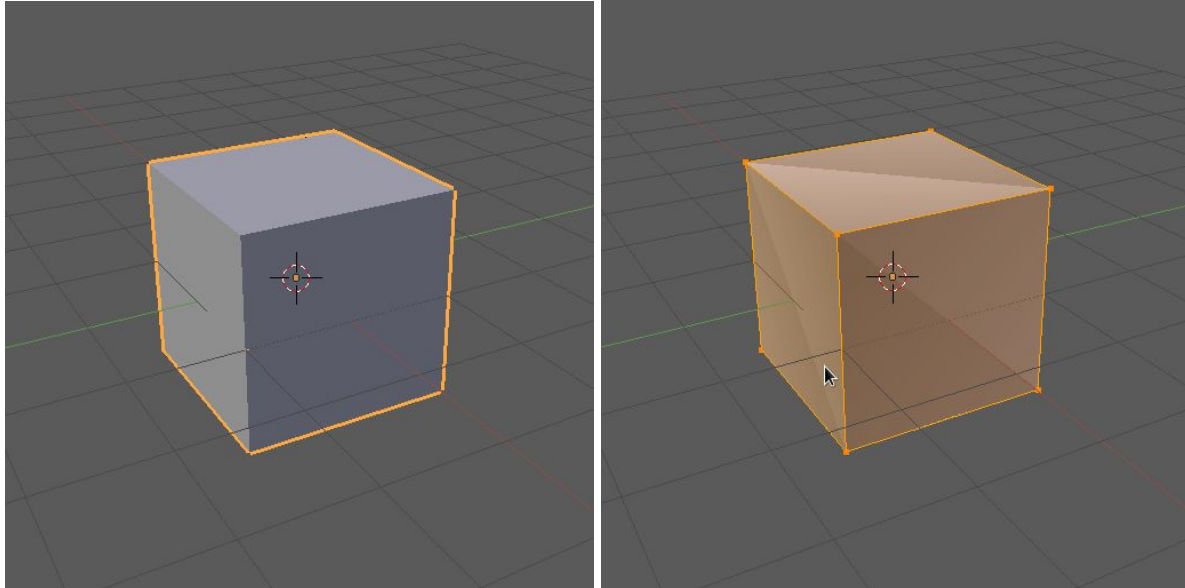> in the **mesh** submenu, well, click cube to add cube

> it will appear at the point where 3d cursor is
> you have probably managed to leftclick couple of times before, and the 3d cursor is dog knows where now
> so delete this new weirdly placed cube
> press Shift + C to place 3d cursor at **center** (global [0, 0, 0] point)
> if you can't shift+C, ~~because you have previously spilled beer over your laptop several times, you should buy yourself a proper full size external USB keyboard with a numpad~~ open N-panel, find 3D cursor tab there, and manually set location to [0, 0, 0]
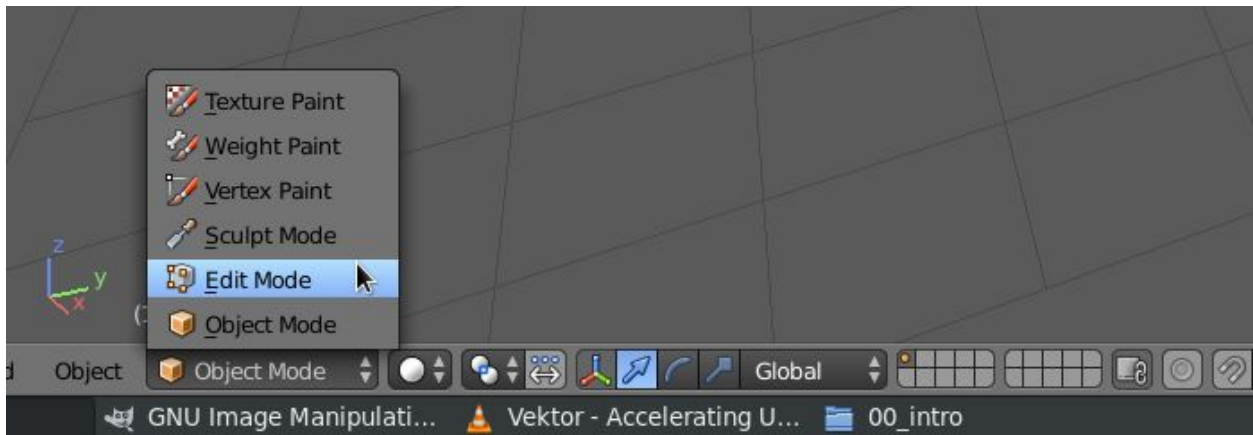// I deliberately didn't put a screenshot for that

> now add properly placed cube

and finally, little bit of actual modeling!

> select the cube and press
> `tab` - switch between **edit mode** and **object mode**

// on the left - cube selected inside object mode, on the right - cube inside edit mode with all its vertices selected
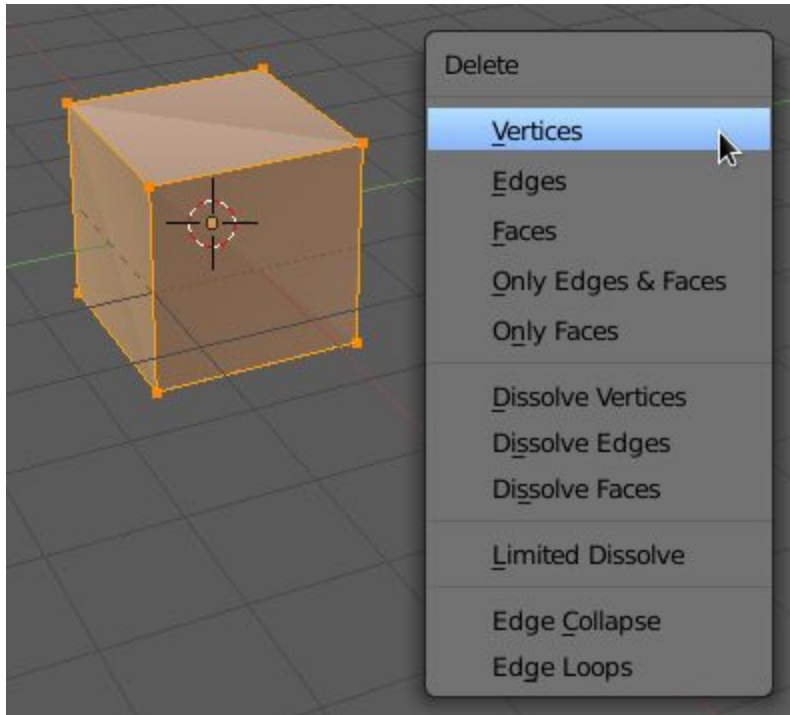

// another way to switch modes
// blender remembers the last mode you were in; pressing `tab` switches you between it and the edit mode;
// (I guess)
// you'll need only **Edit Mode** and **Object Mode** for now

> okay, while in the **edit mode**
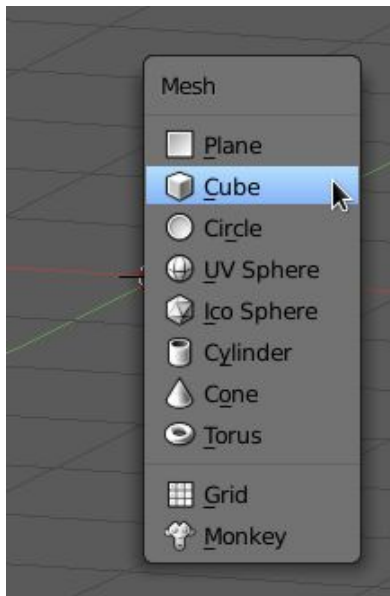> pressing `A` selects/deselects all vertices

> select all
> press `X` to call **delete** menu

// notice that the menu is different from edit mode - it happens often,
when same commands work differently in different parts of software

> click vertices

> call **Add** menu again

// it is also different from object mode Add menu

> AND YET AGAEN add new cube (well, for simplicity's sake)

> `Right-click` to select random vertex
> while holding `shift`, select couple more adjacent vertices
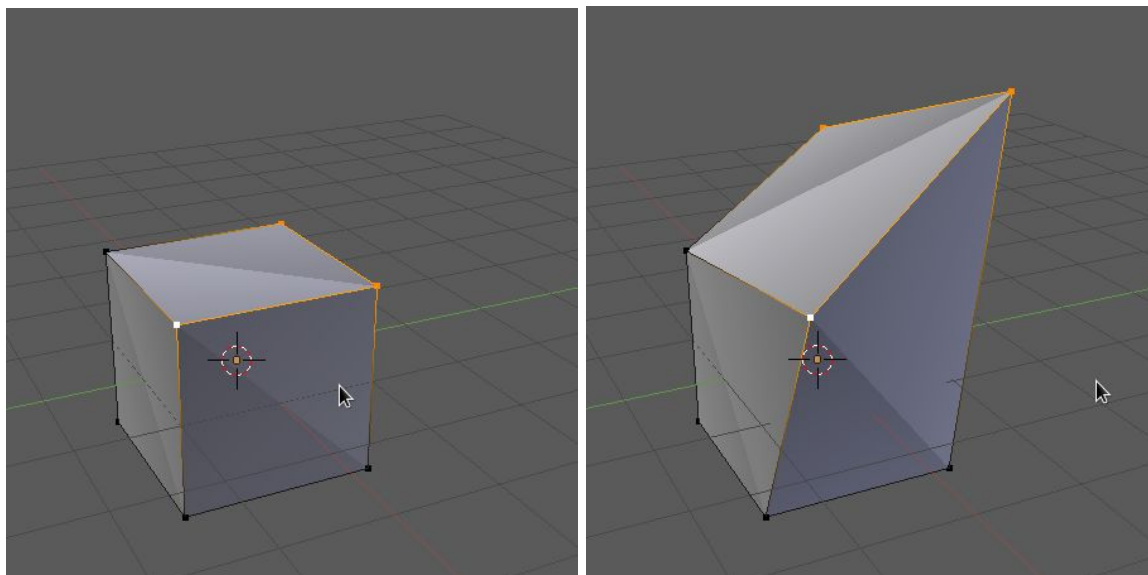
Ten-hut!

transformations:
    // S = scale, R = rotate, G ??? Translate ???
    // these are three types of **transformation**
    // (and do not confuse 'translate' and 'transform')
    > `G`, `R`, `S` - press one of these three keys to toggle transformation, and
    > drag the mouse around (without holding any keys!)
    > `right click` - cancel transformation
    > `left click` - accept transformation
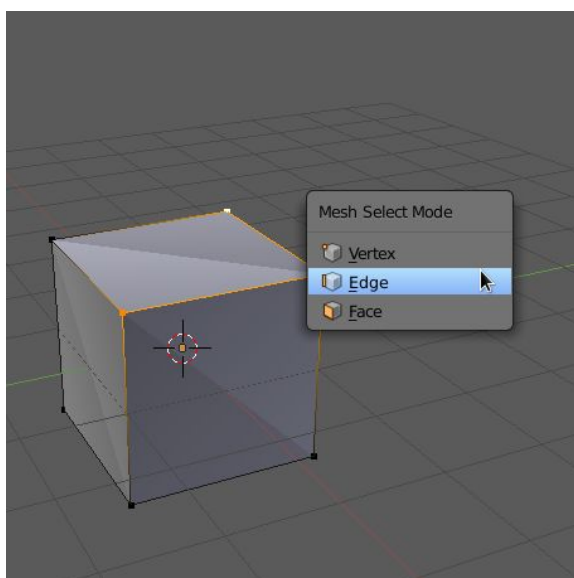   > you can Ctrl+Z by repeatedly pressing Ctrl+Z

if you want to restrict transformation to one or two axes:

    > (while in active transformation)
    > press `X` - restrict to **x-axis**
    > `Shift + X` - restrict to two axes, excluding **x-axis**
    > obvjrtsly, pressing `Y` and `Z` werks for **y-** and **z- axes** the same way

At ease.

//on the left - cube with 3 vertices selected, on the right - result of
several successive translate, rotate and scale transformations, performed
on these vertices

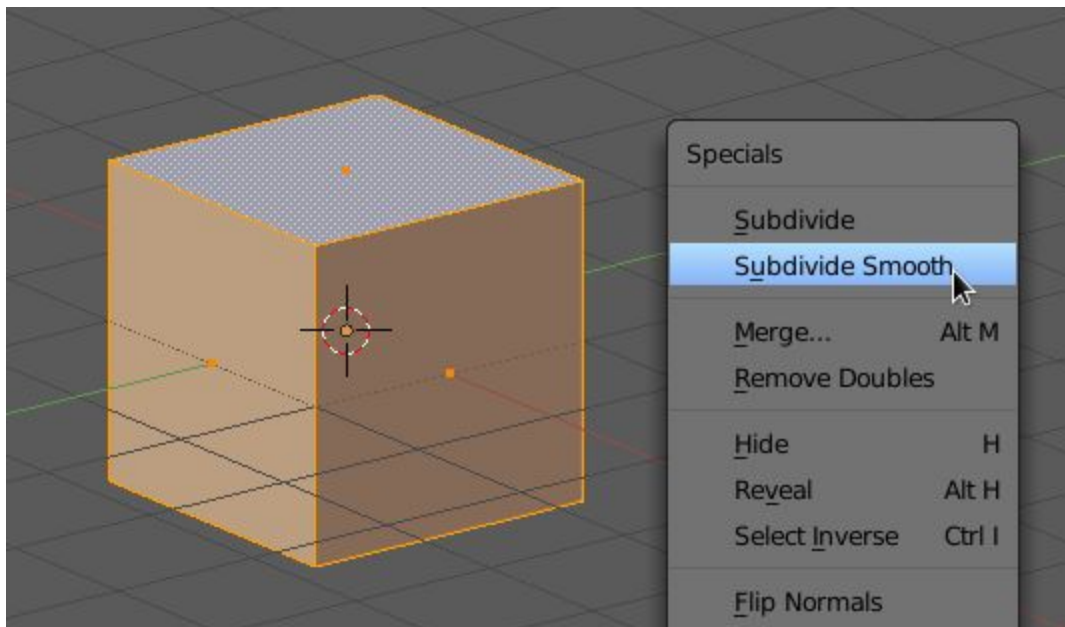> `Ctrl + Tab` to open **mesh select mode** menu

Demonstrating all three options and manually filming this on
screenshots would be a huge pain, so just try it for yourself
without guidance from a guy who has nothing better to do than
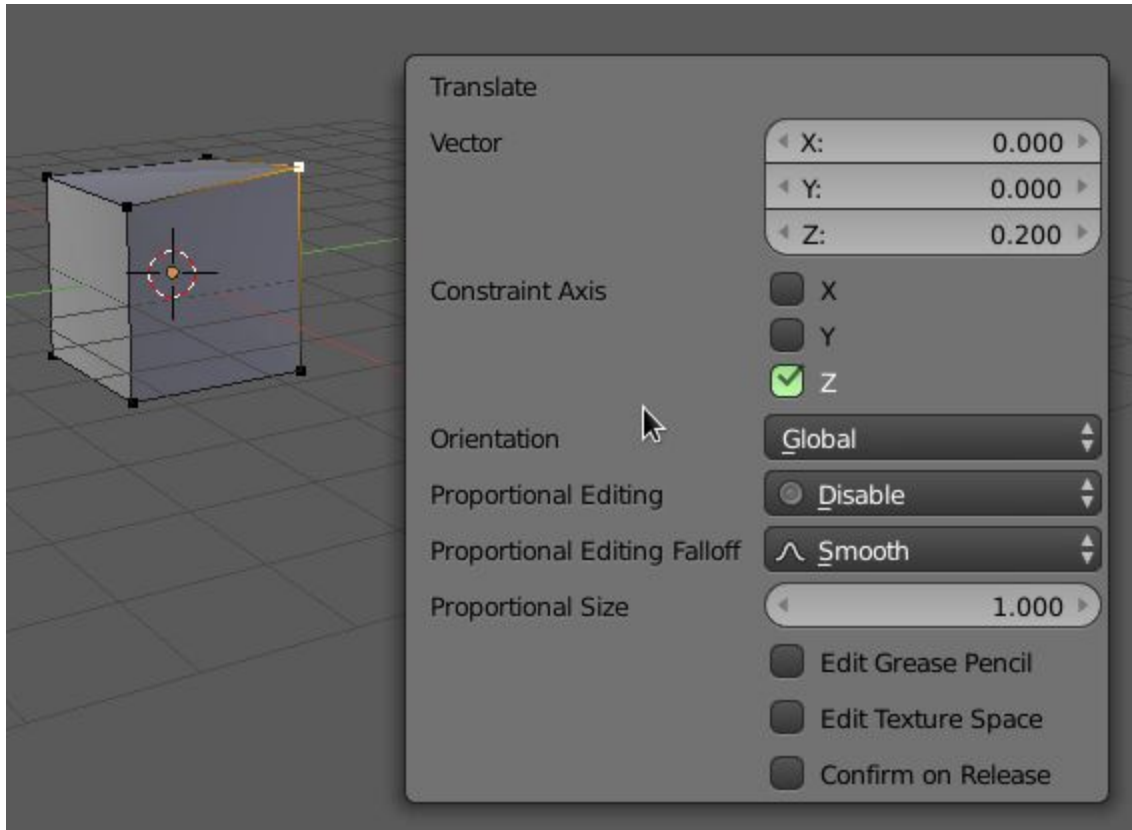stay awake until 7am making tutorials in Google Docs.

> yeah, so for every option in **mesh selection mode** menu
> click it
> select something
> (or shift-select multiple somethings)
> do some transformations
> ctrl+z back out of them if you messed it up too bad

Below are some tools and features for you to try out on your
own. What I've already explained should be enough for you to
figure out how they work.

> `E` for Extrude Region
> `Shift + D` for Duplicate
> controls for both are similar to controls for translating
> (in fact, these operations **include** translating)

> press `W` to call **Specials menu**

> and try out **Subdivide** and **Subdivide Smooth** operations

> after performing almost any operation in Edit mode
(including adding new mesh primitive), press `F6` to call a
pop-up panel, that allows you to alter operation parameters

//F6 panel after translating a vertex by .2 units in Z direction

> try different options from **mesh deletion menu,** combined with different **mesh selection modes**

> press `Z` to change between **wireframe** and **solid** viewport shading

A NOTE OF MILLION LEVELS OF IMPORTANCE
a great way to accidentally lose your work:
    > after working on mesh in edit mode
    > switch to object mode
    > Ctrl+Z
    > that will undo all changes that happened since the last time you've switched to edit mode
    > then do something else
    > blender doesn't remember anymore what was that that you ctrlzded

> so you can't `Ctrl + Shift + Z` to **redo**, and what you have done during last 30 minutes is now nonexistent, lost, gone, like, forever

So yeah. Pay attention, save often, and don't drink too much.