



Prifysgol Cymru  
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**University of Wales**  
Trinity Saint David

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**College of Art**  
Founded 1853

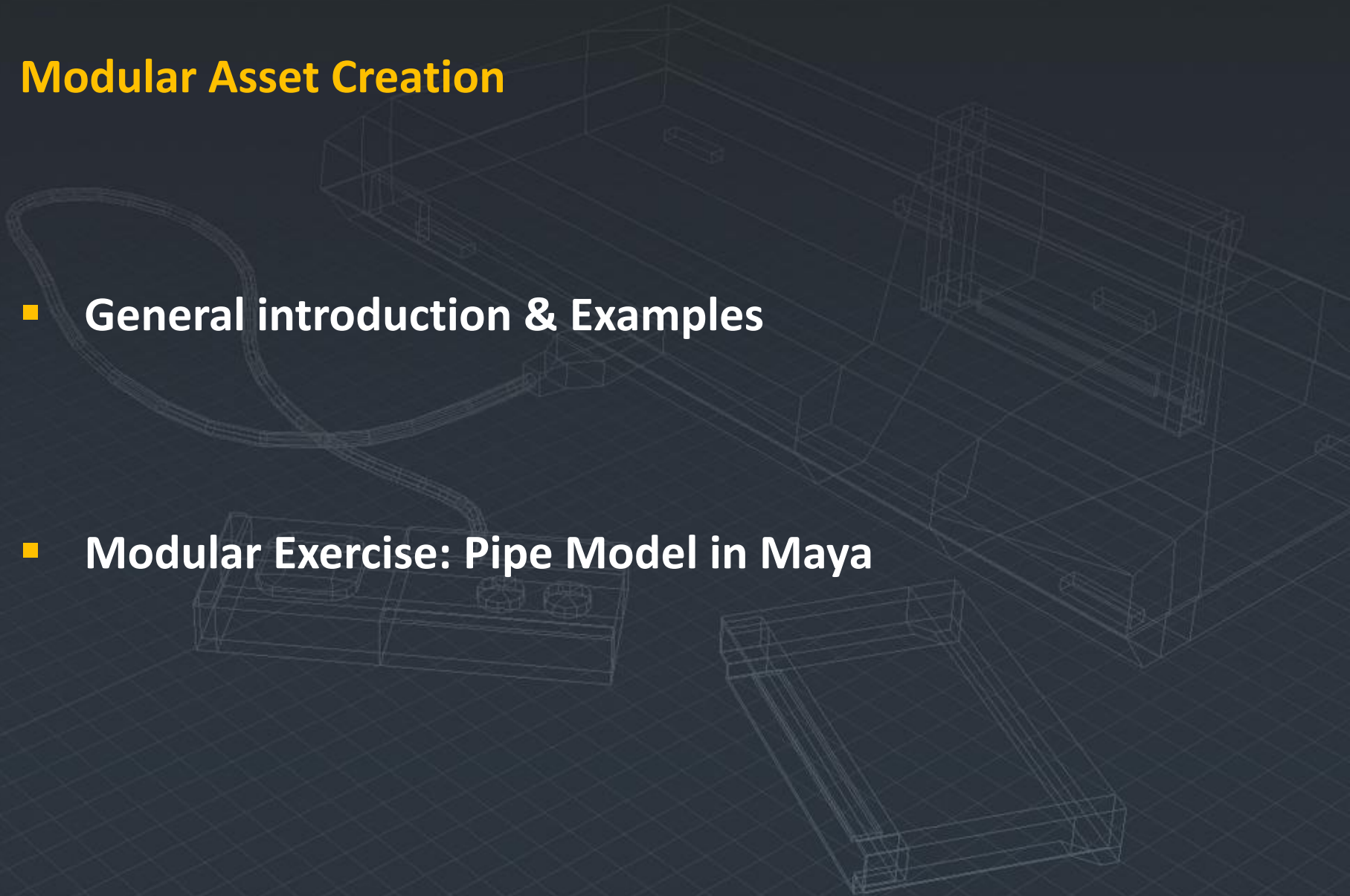
# DIGITAL CONTENT CREATION

RICH MORGAN

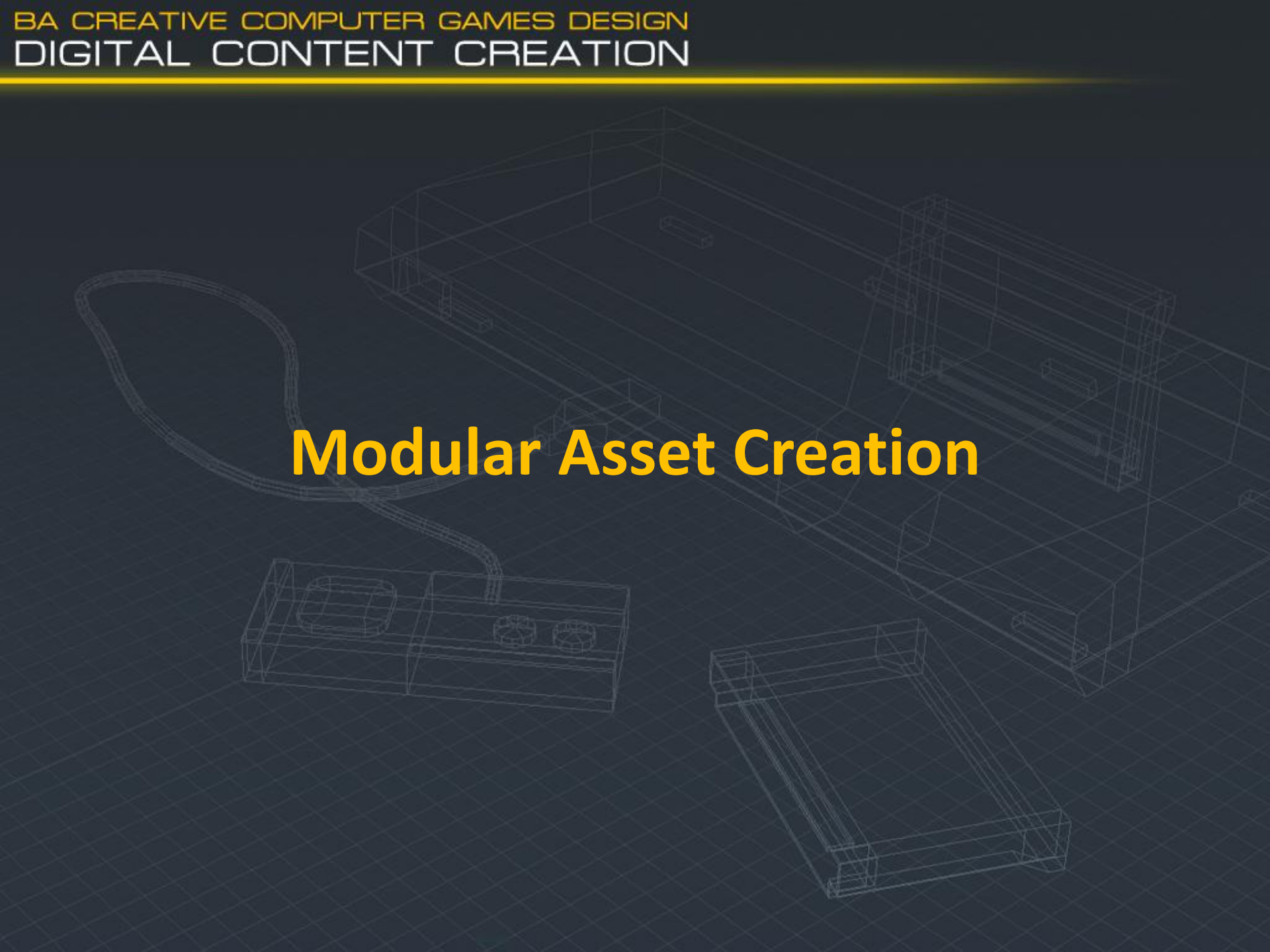
BA CREATIVE COMPUTER GAMES DESIGN

## Modular Asset Creation

- General introduction & Examples
- Modular Exercise: Pipe Model in Maya



# Modular Asset Creation

A wireframe 3D model of a modular game environment. The scene features several interconnected rectangular blocks of varying sizes, some with internal structural details like pillars and beams. A long, curved, segmented tube or pipe extends from one of the blocks. The entire model is rendered in a light blue wireframe style against a dark blue background with a subtle grid pattern.

## Modular Assets: Examples



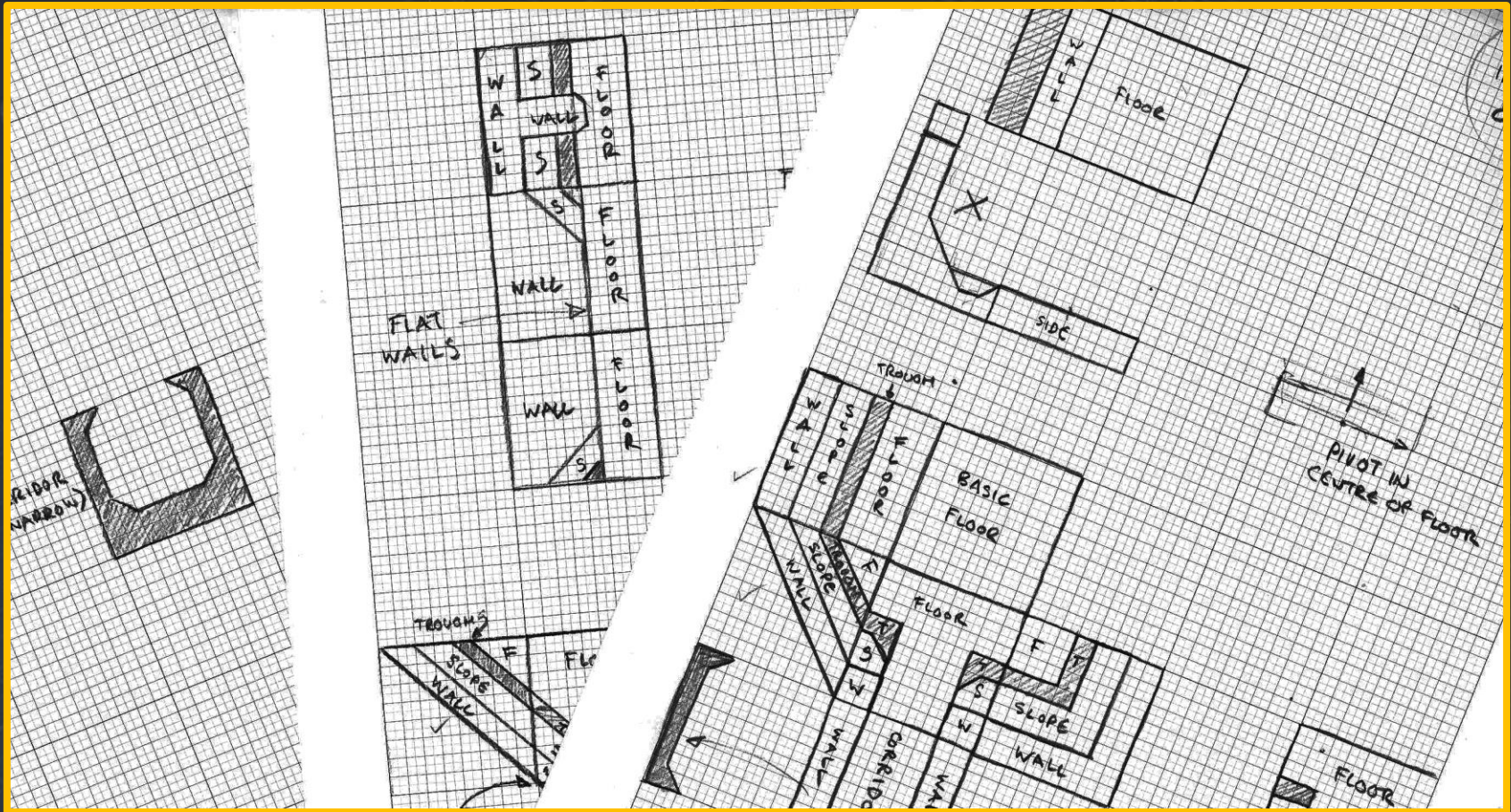
## Modular Assets: Examples



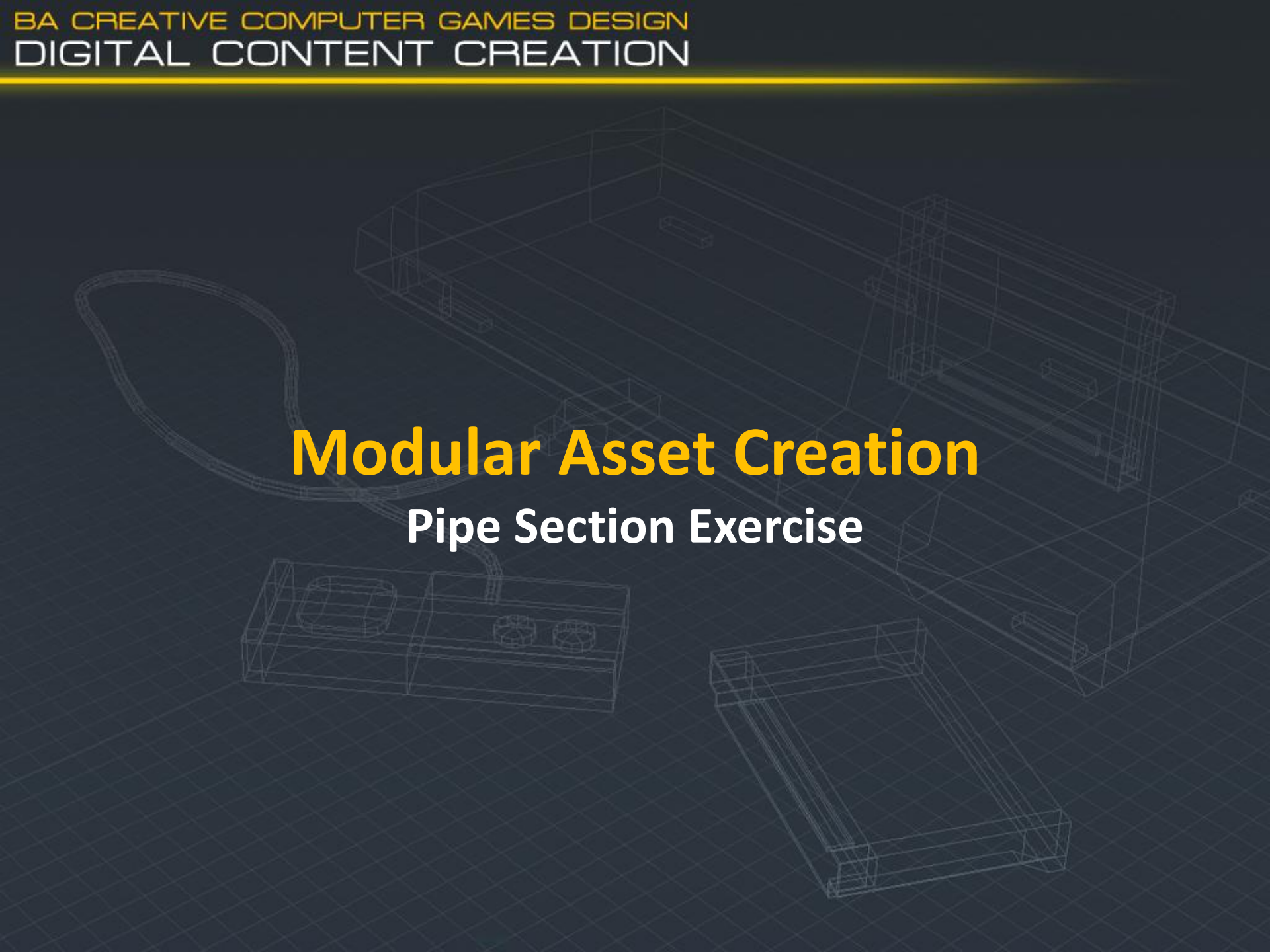
## Modular Assets: Examples



## Modular Assets



Work *smart*, not *hard*!

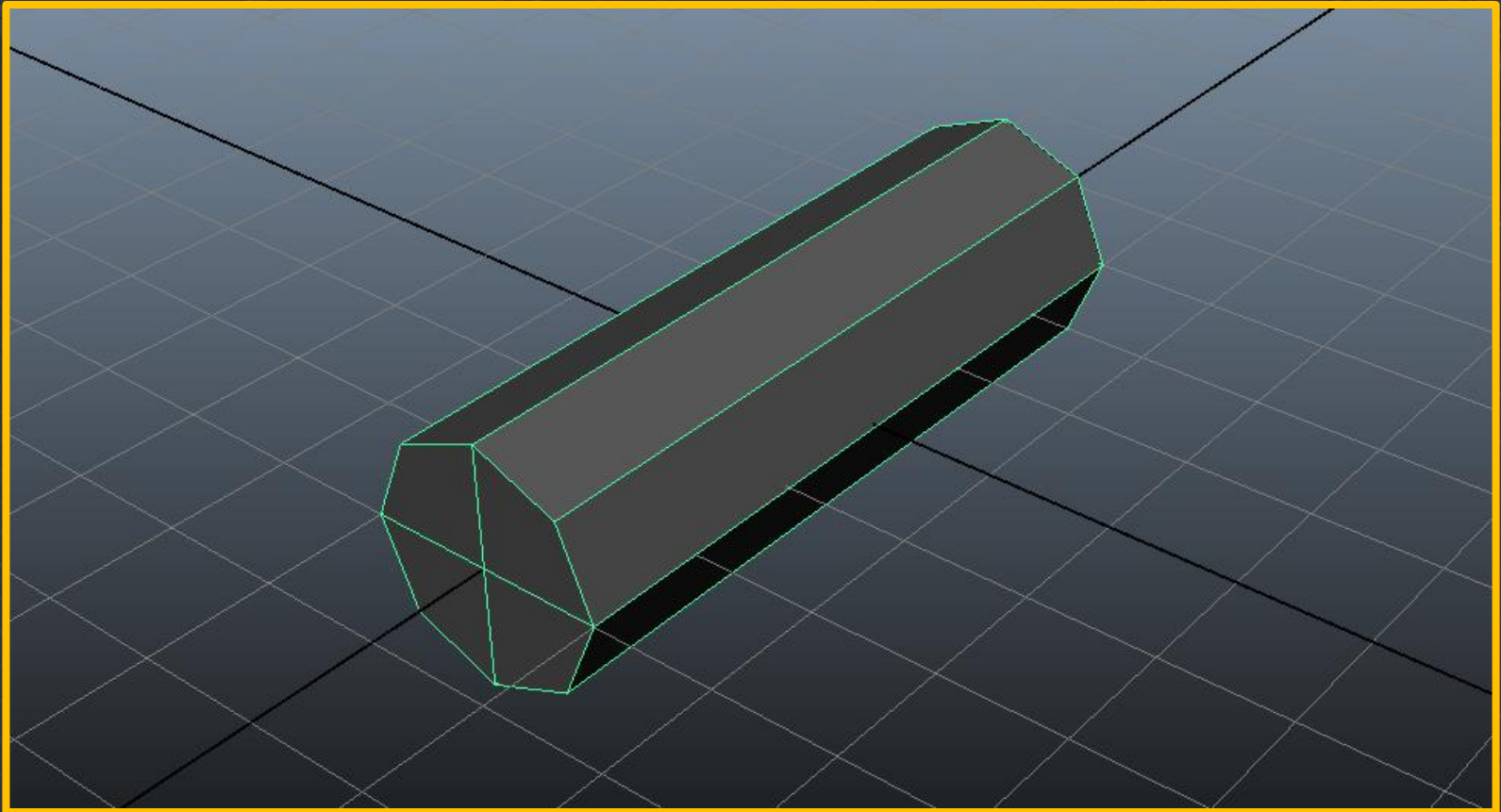
A wireframe 3D model of a modular asset creation exercise. The scene features a large rectangular base structure with various internal components and a curved pipe-like structure extending from it. In the foreground, there are several smaller rectangular blocks, some with internal details like a circular opening and two small circular components. The entire scene is set on a grid floor.

# Modular Asset Creation

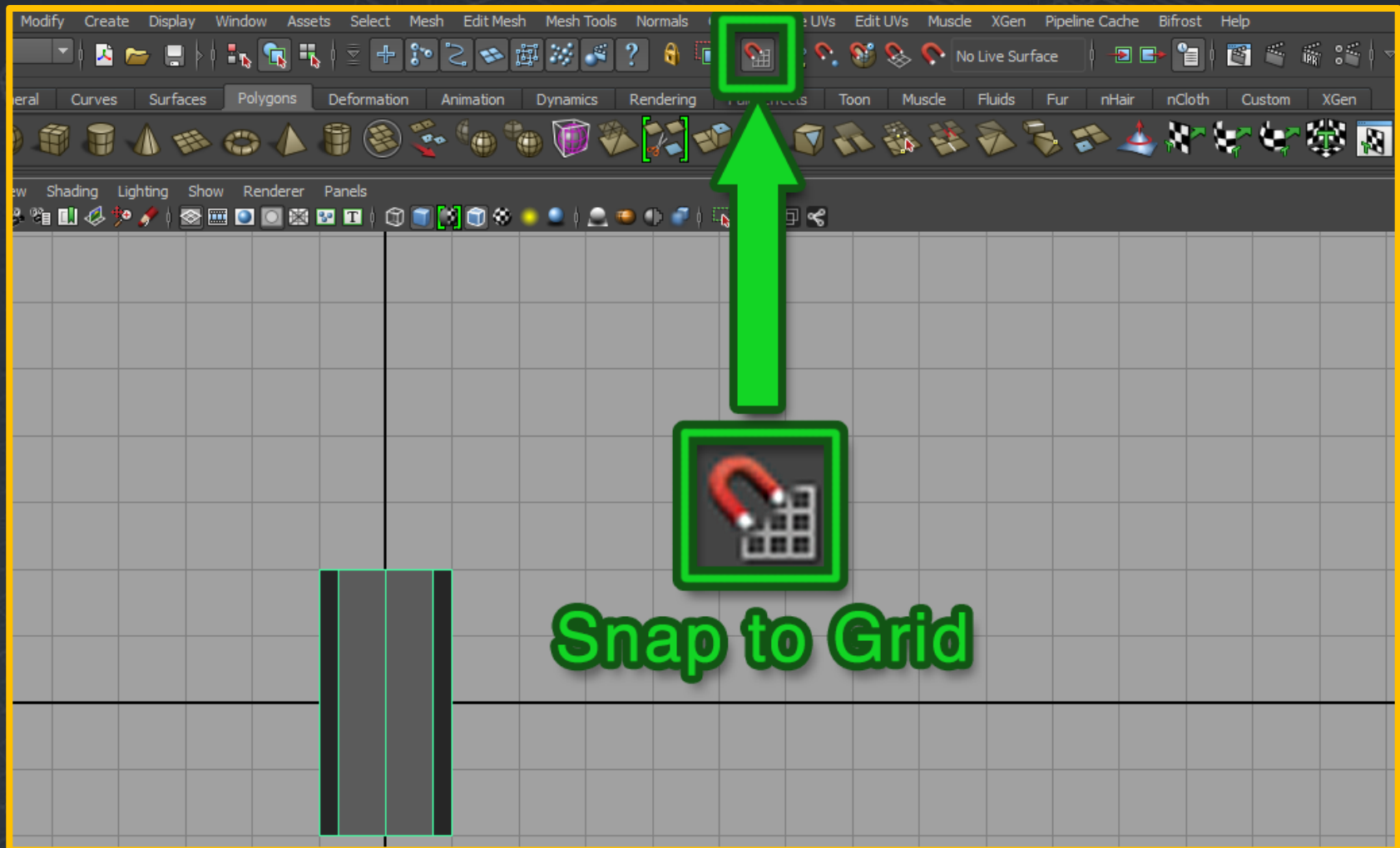
## Pipe Section Exercise

## Modular pipe section exercise

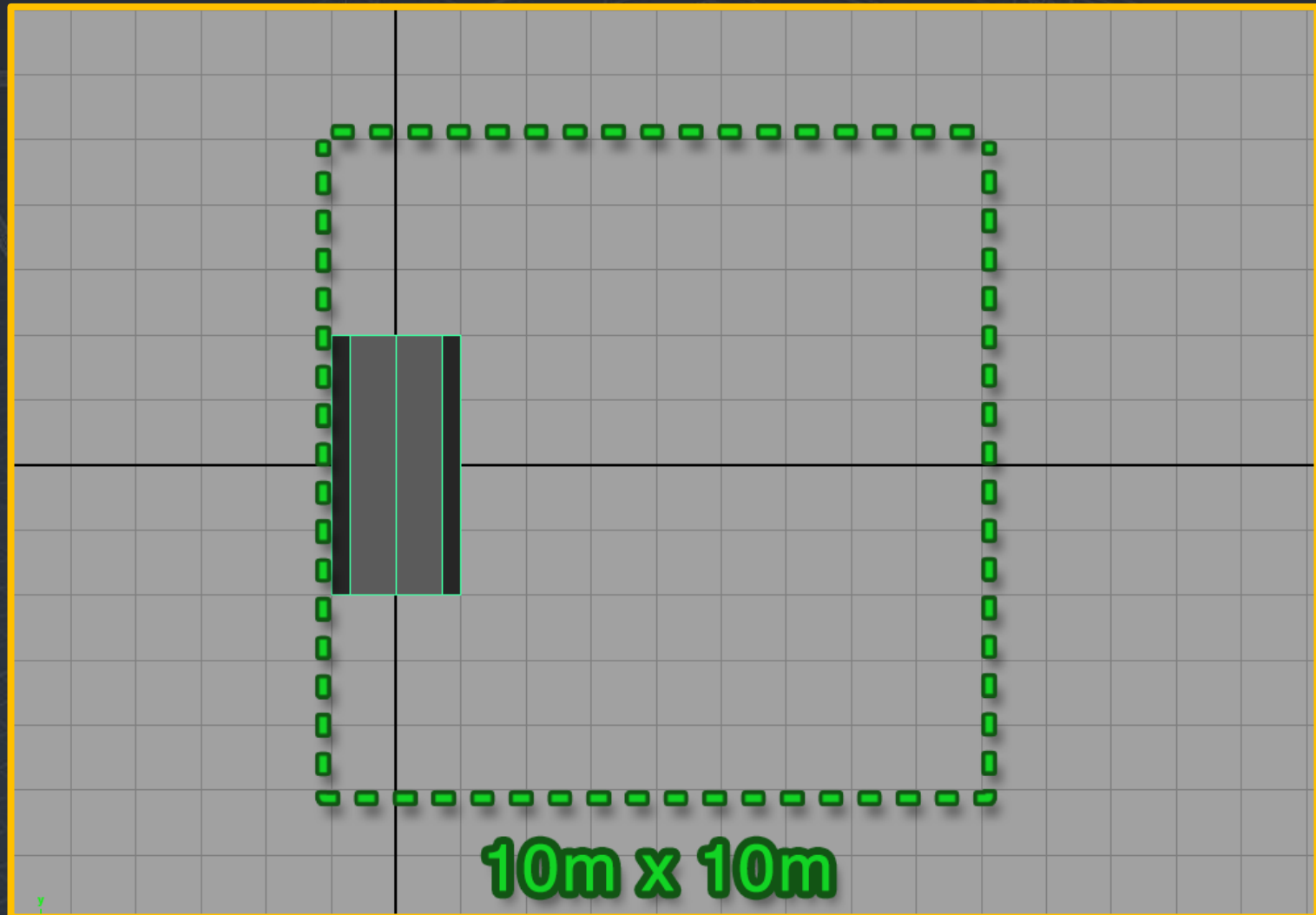
Download **DCC\_pipe\_example.fbx** from Moodle



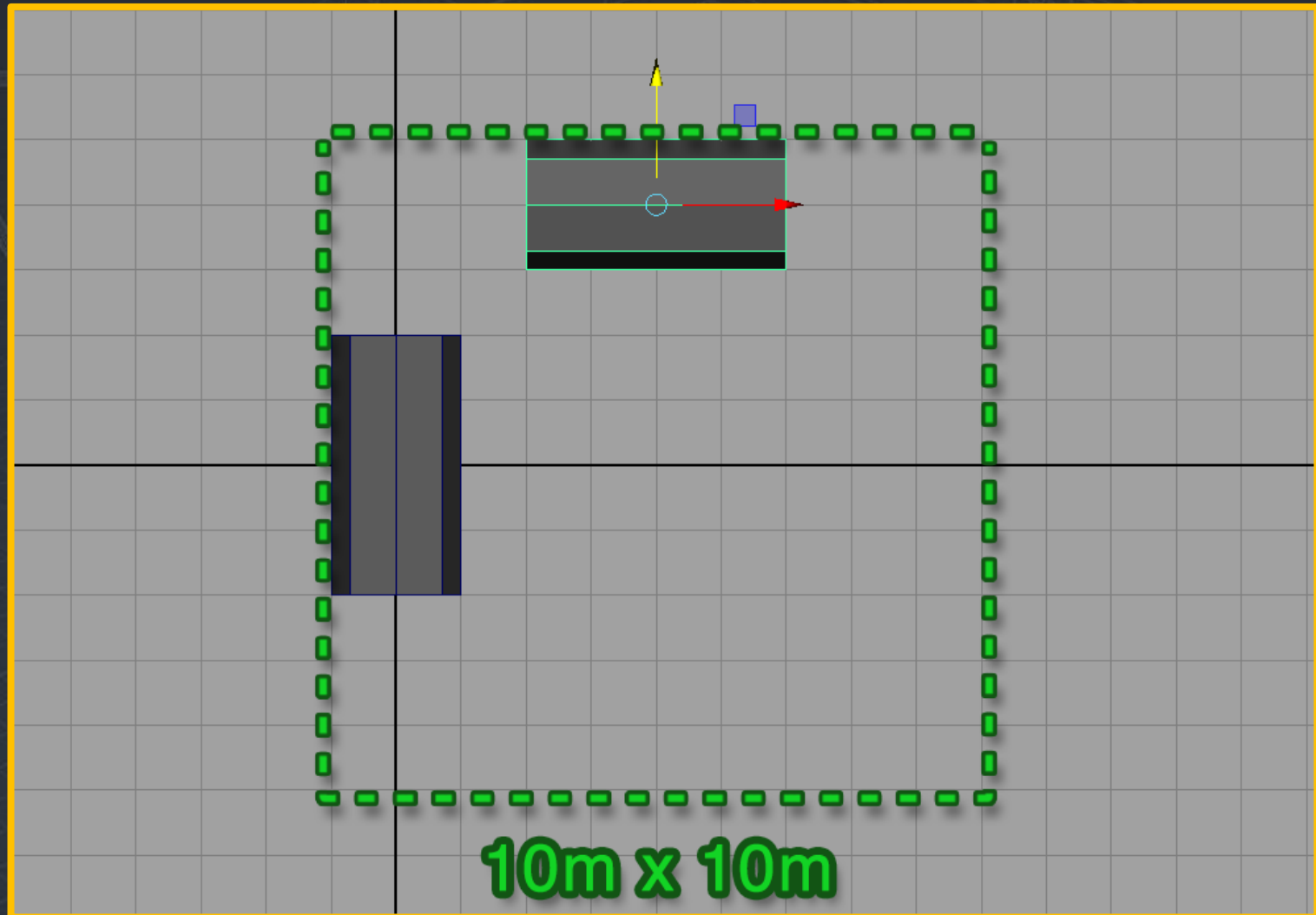
## Maya: Snap to Grid



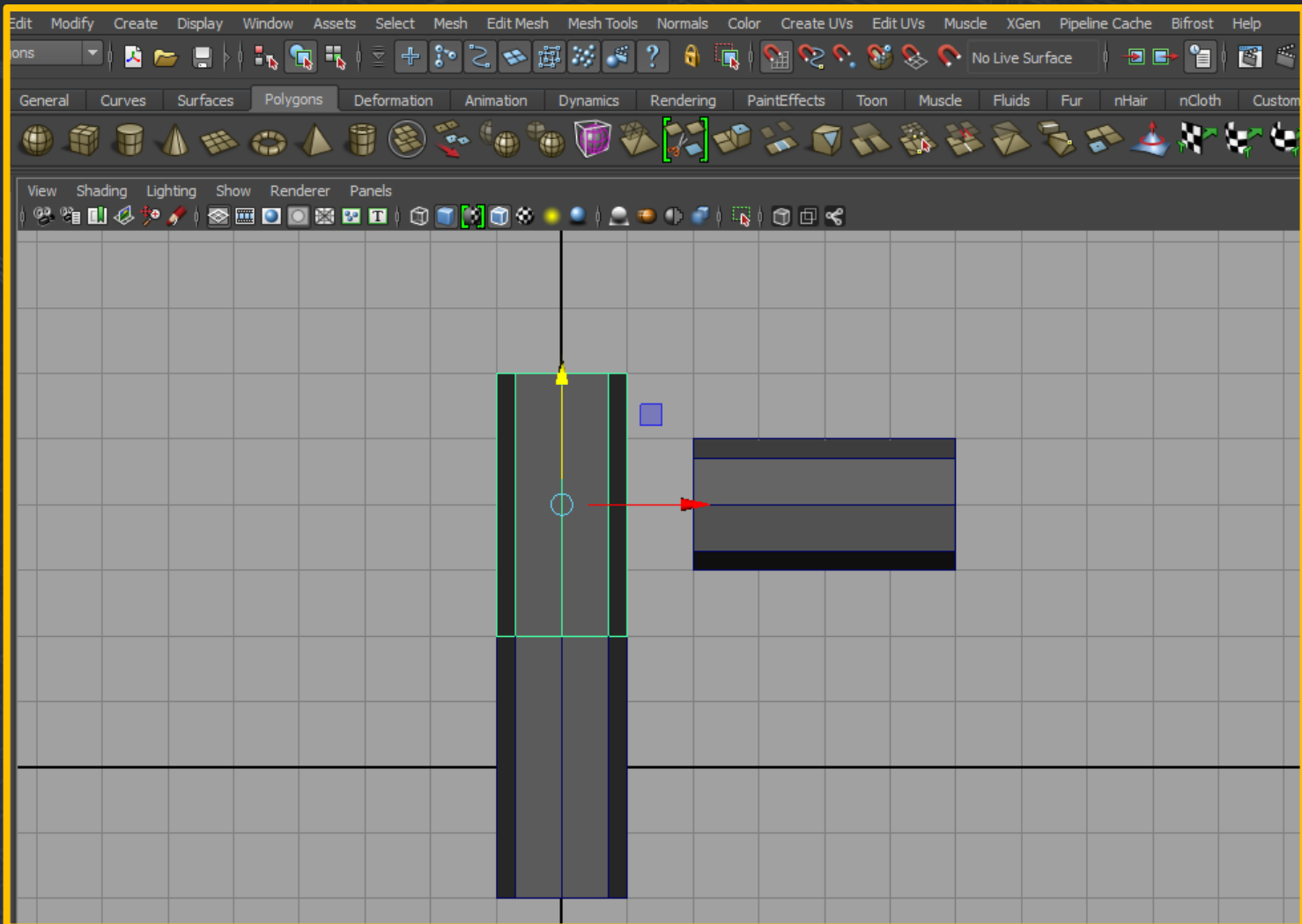
**Work out your Grid Sizes FIRST!**



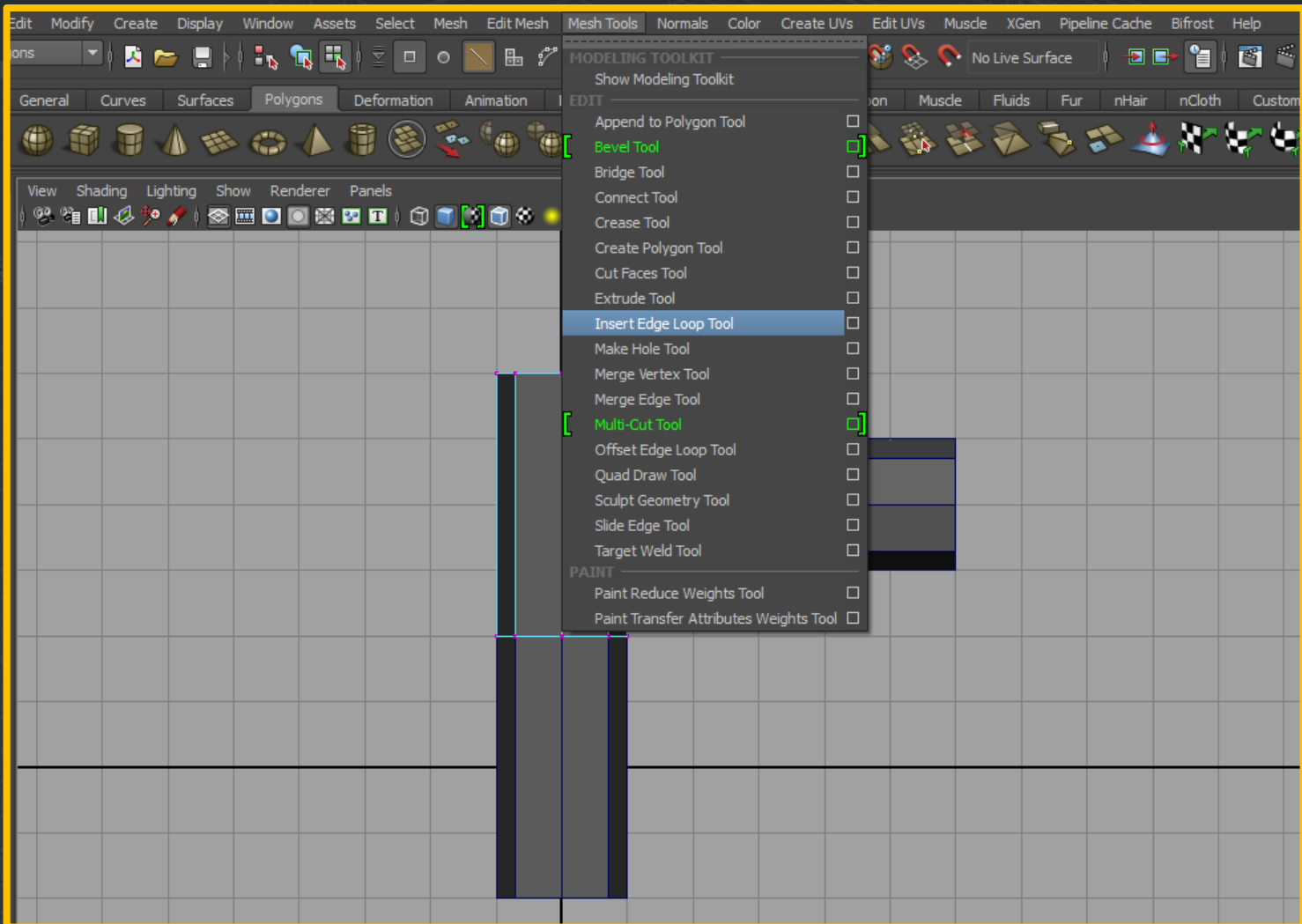
**Work out your Grid Sizes FIRST!**



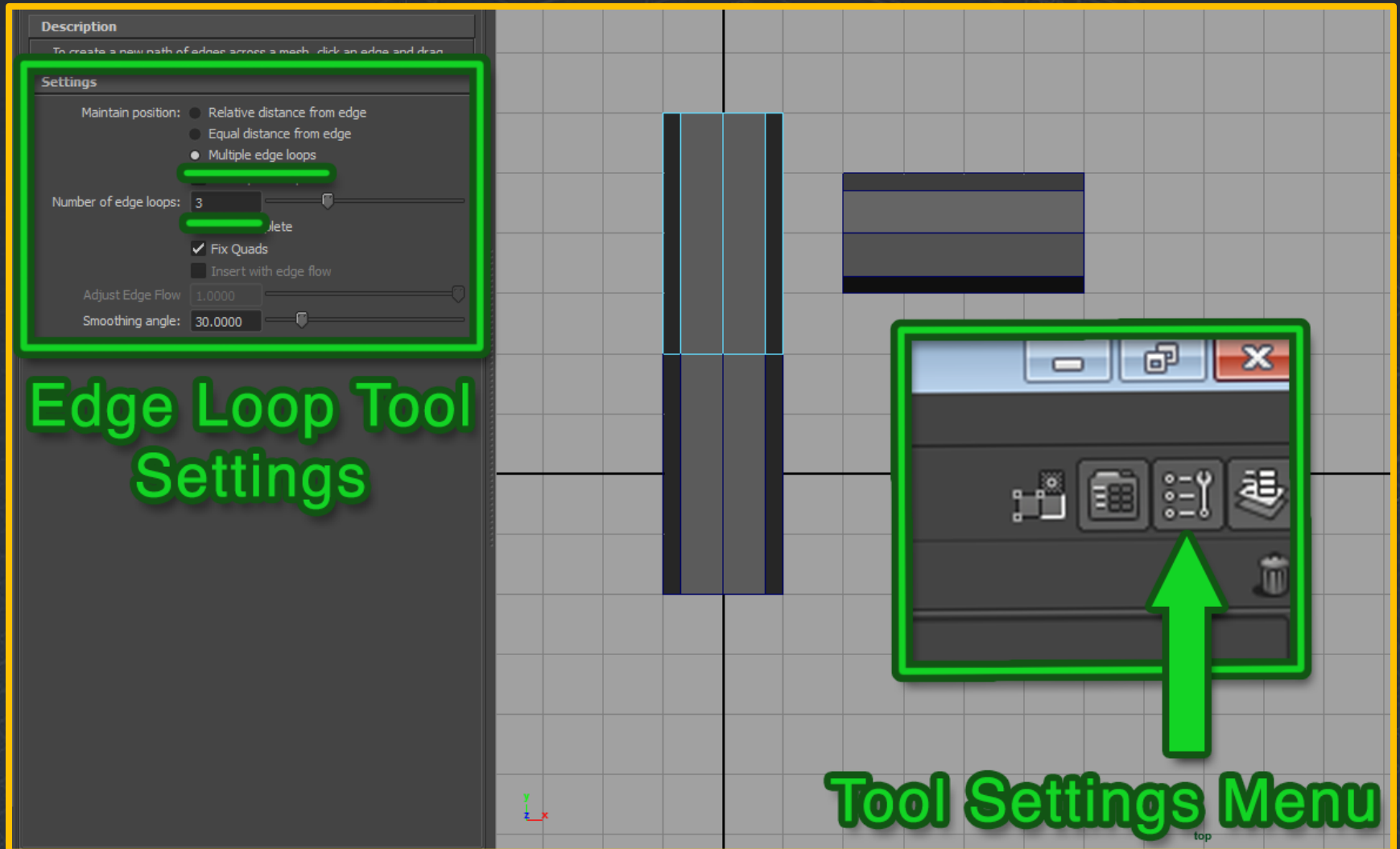
## Duplicate objects and align using SNAP TO GRID



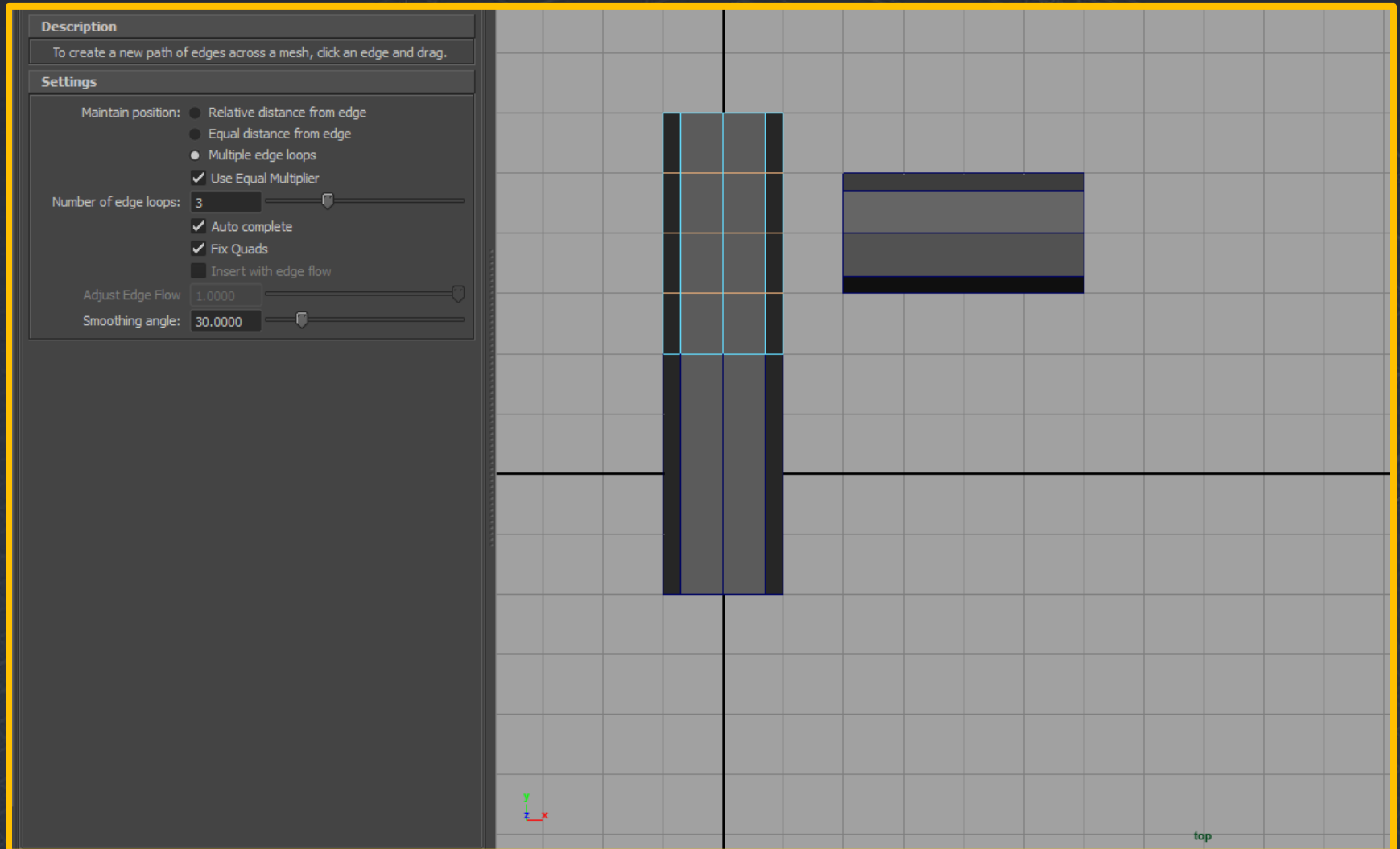
### Edge Loop Tool Settings: Multiple edge loops



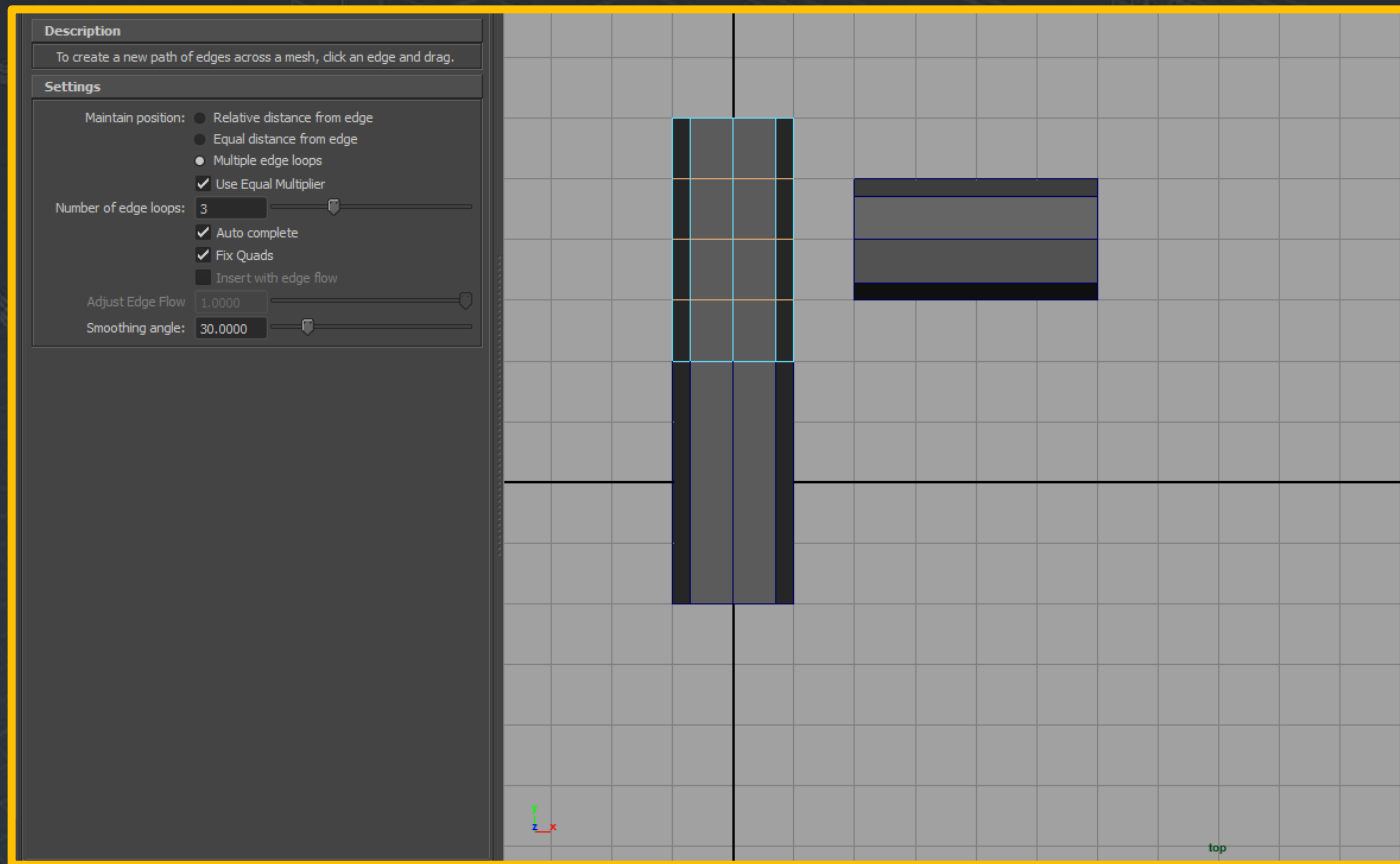
## Edge Loop Tool Settings: Multiple edge loops



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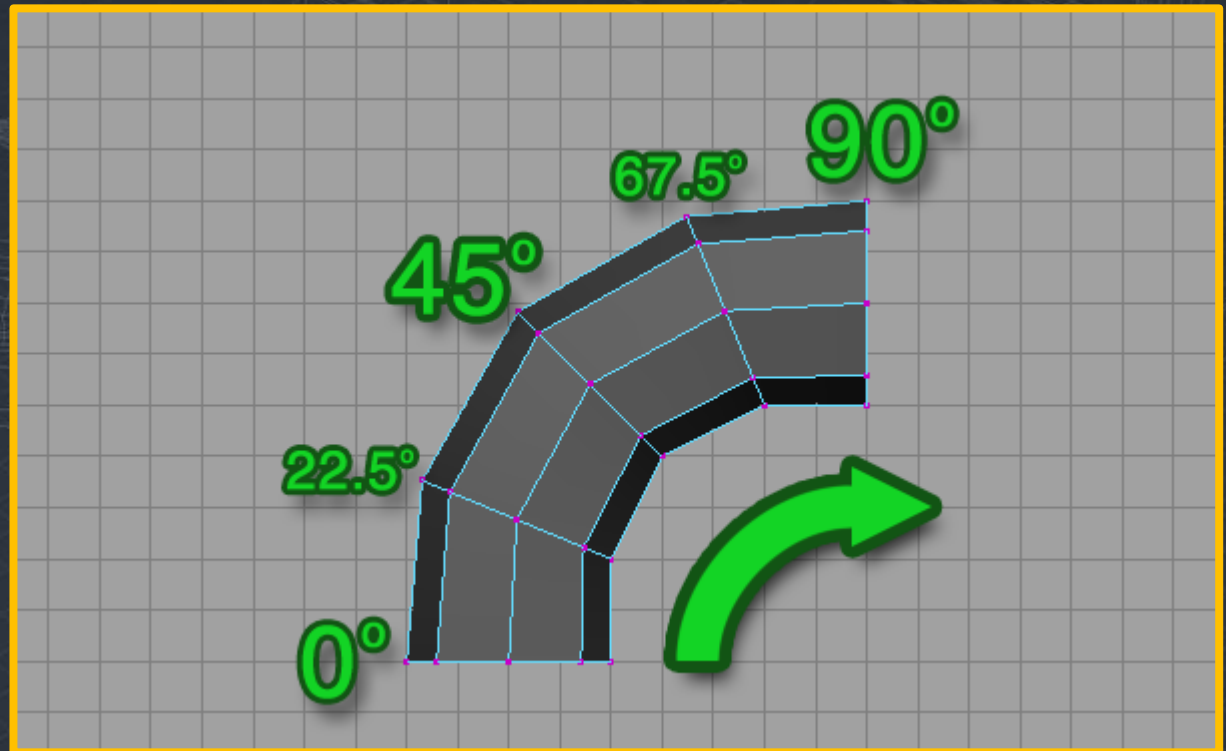
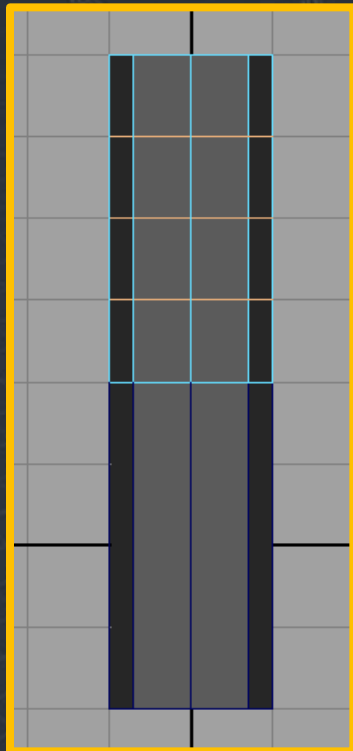
### Edge Loop Tool



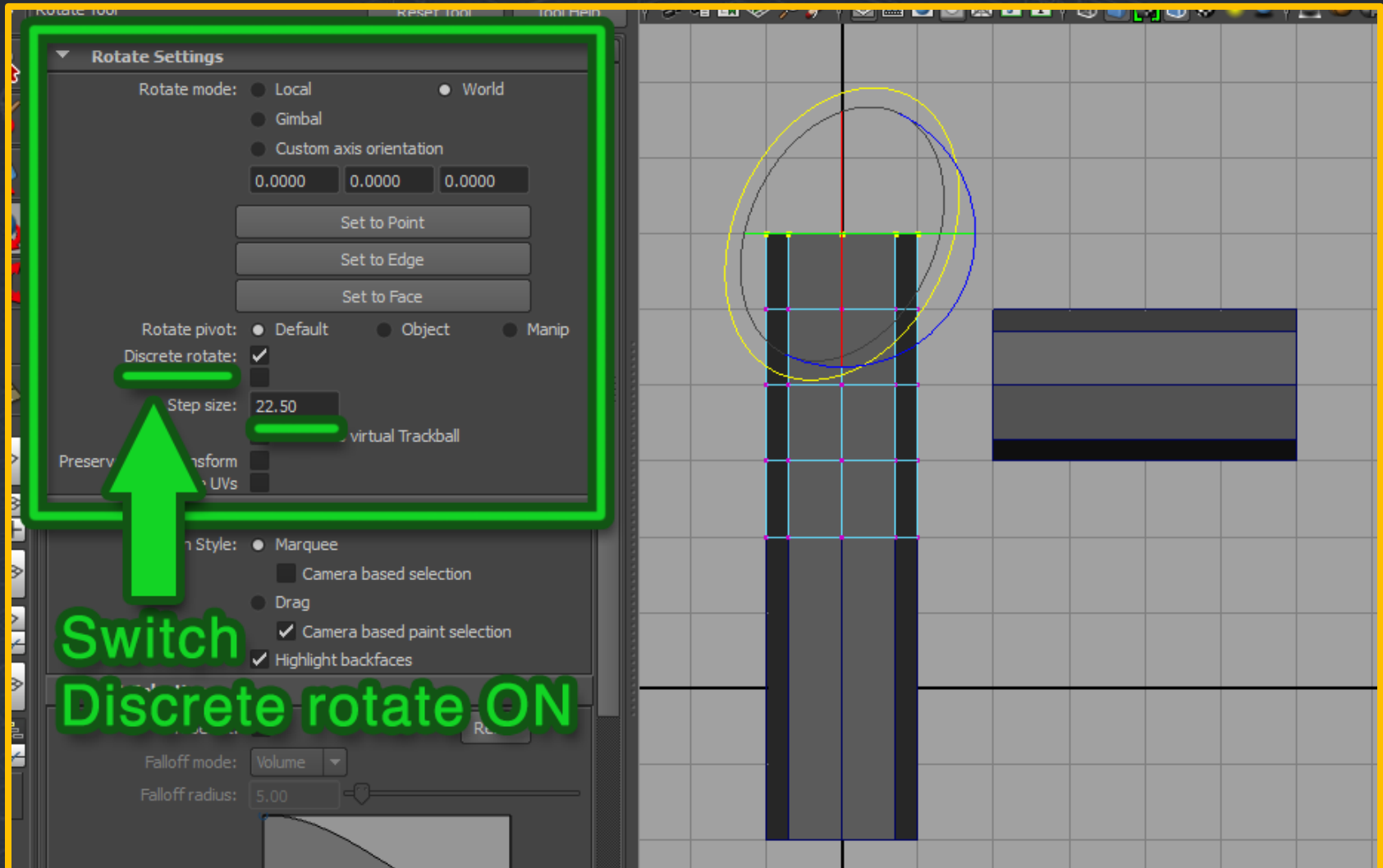
**NOTE:** Do not forget to change these settings back after use!

## Rotation: Forward Planning

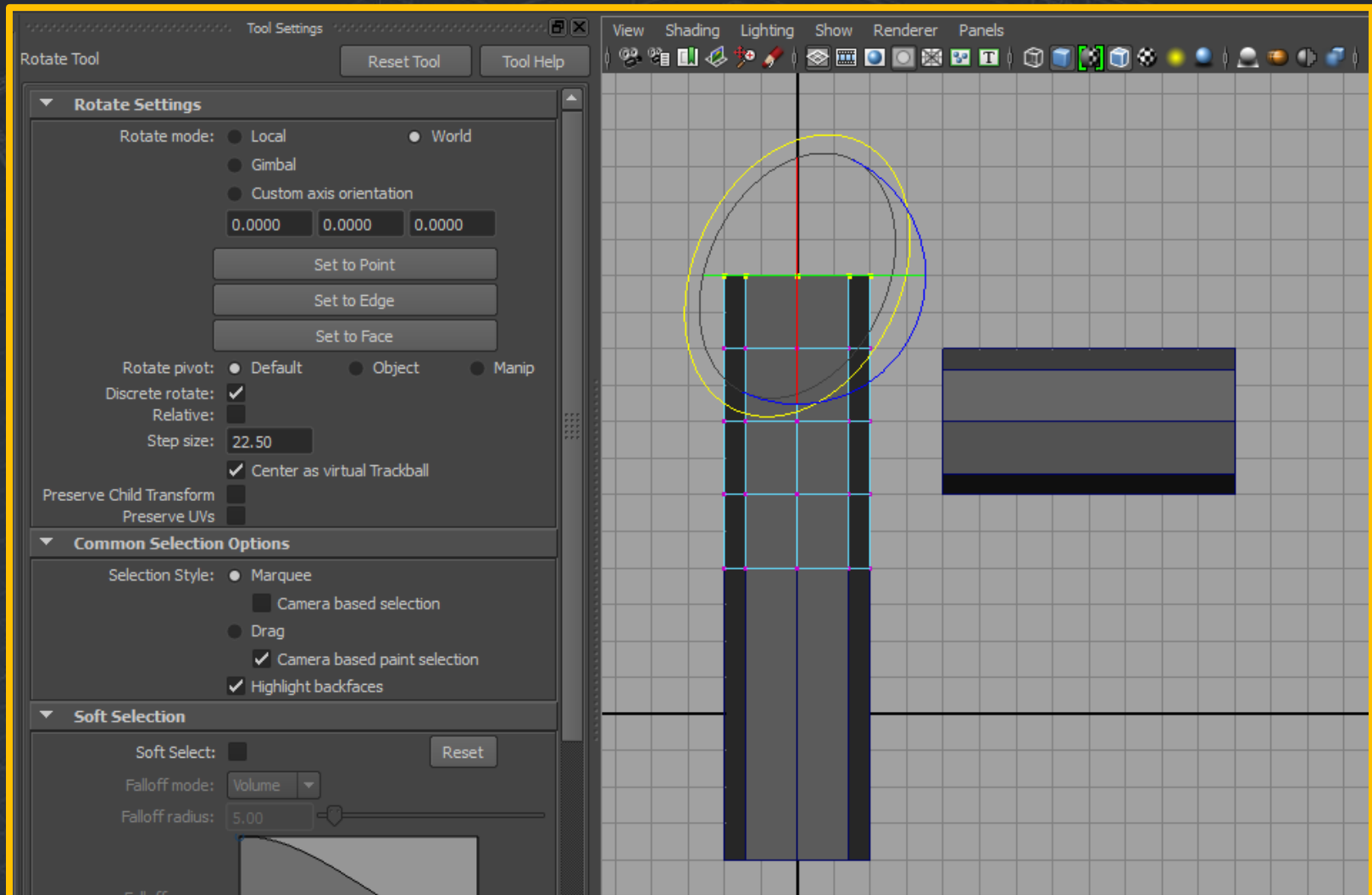
Divide the rotation by the amount of edge loops on the asset being modified



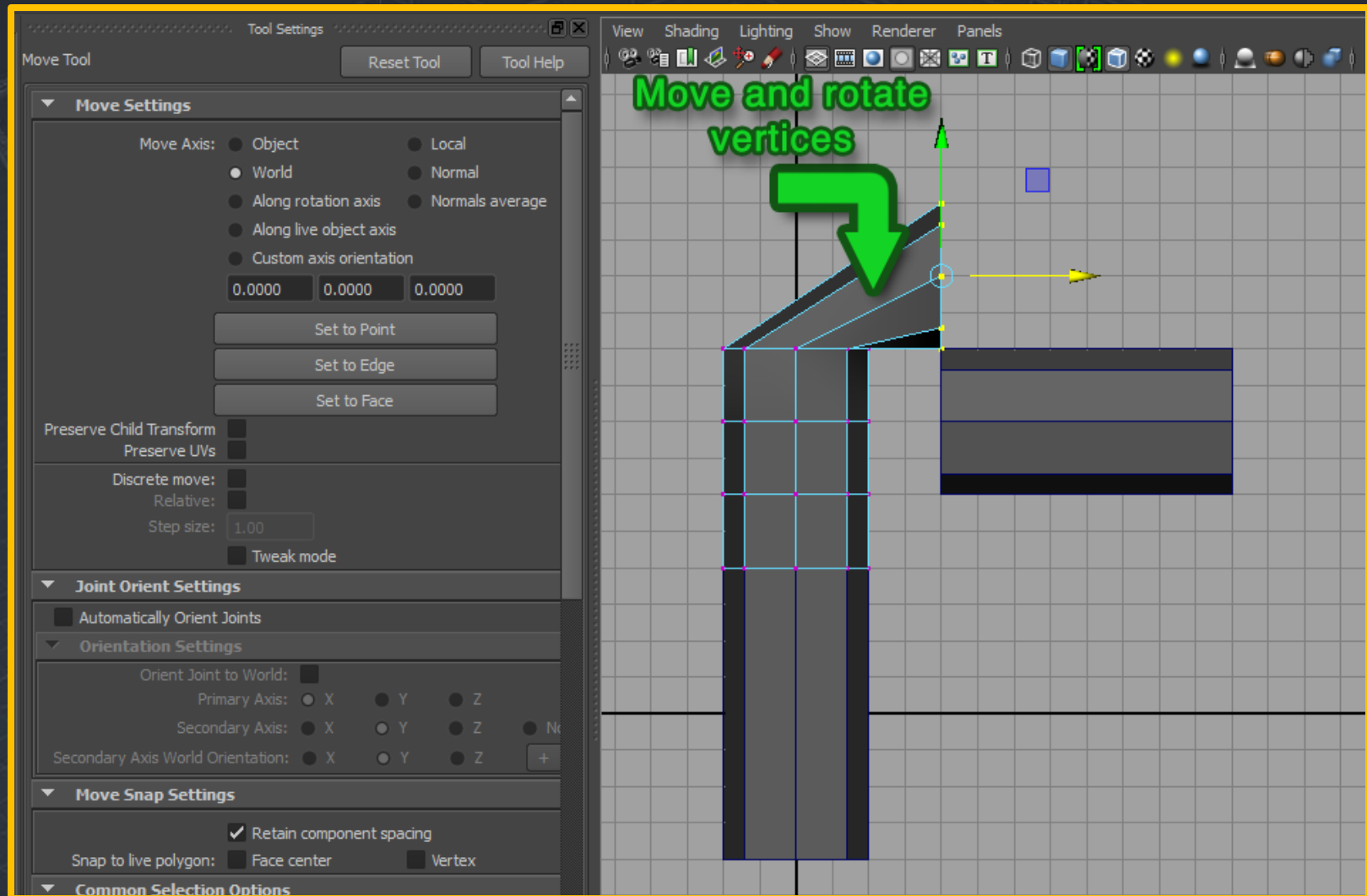
## Rotate Tool Settings



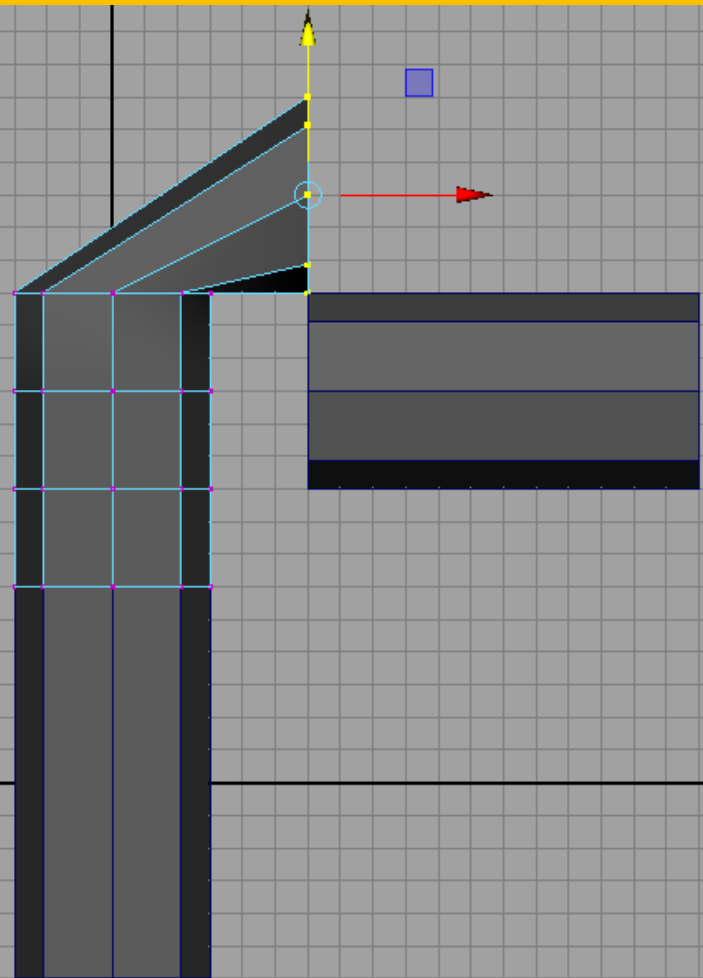
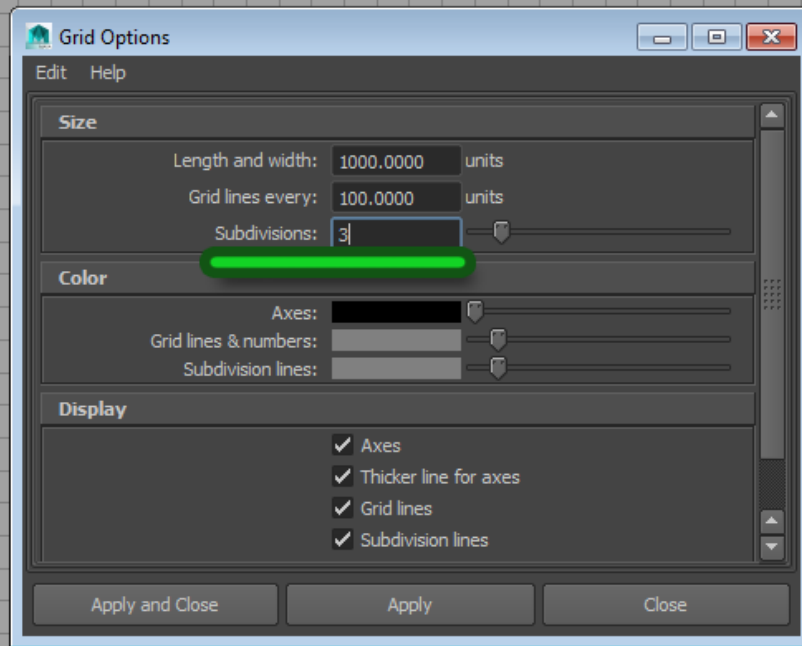
### Rotate Tool Settings



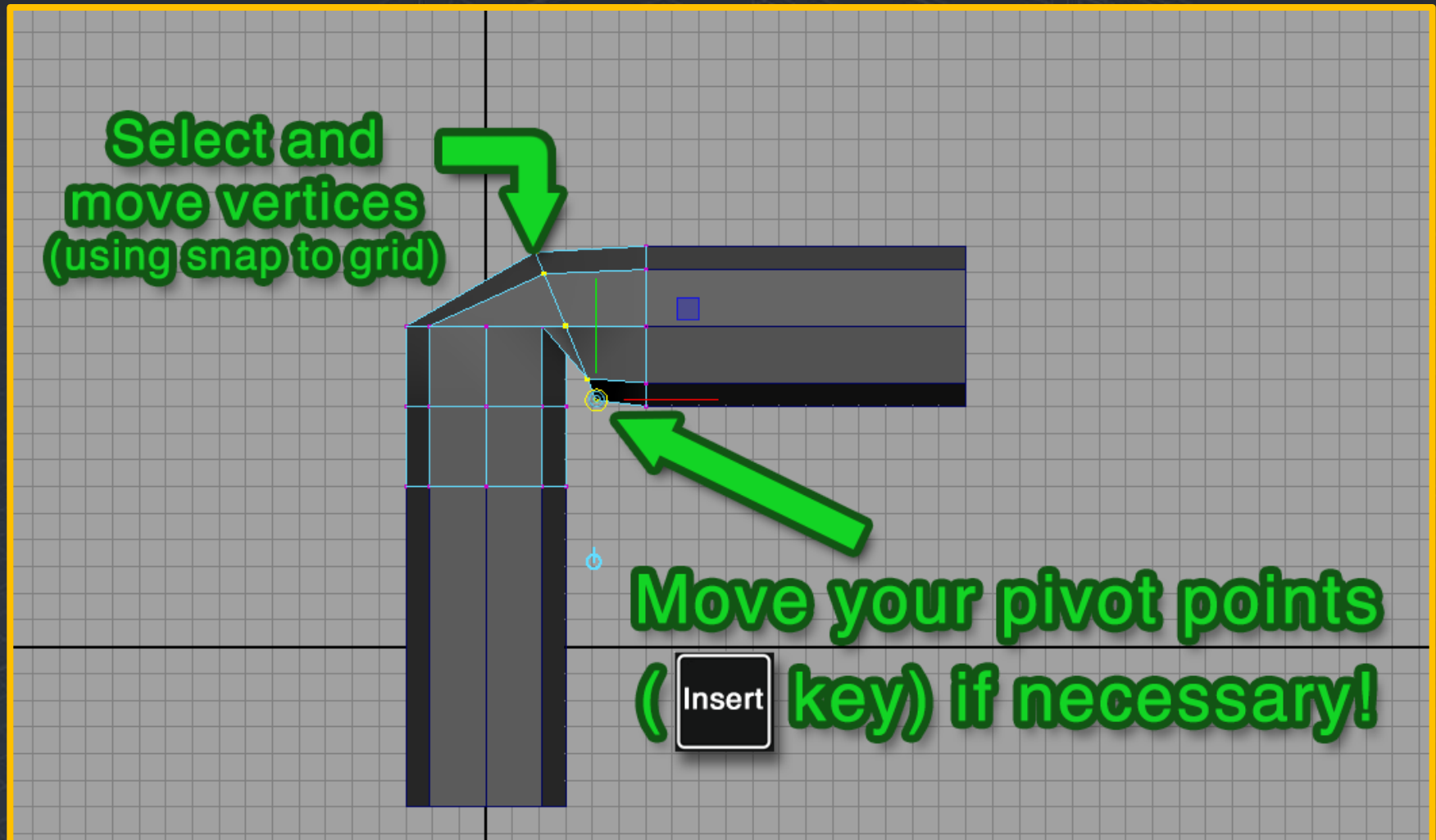
### Move and Rotate Vertices



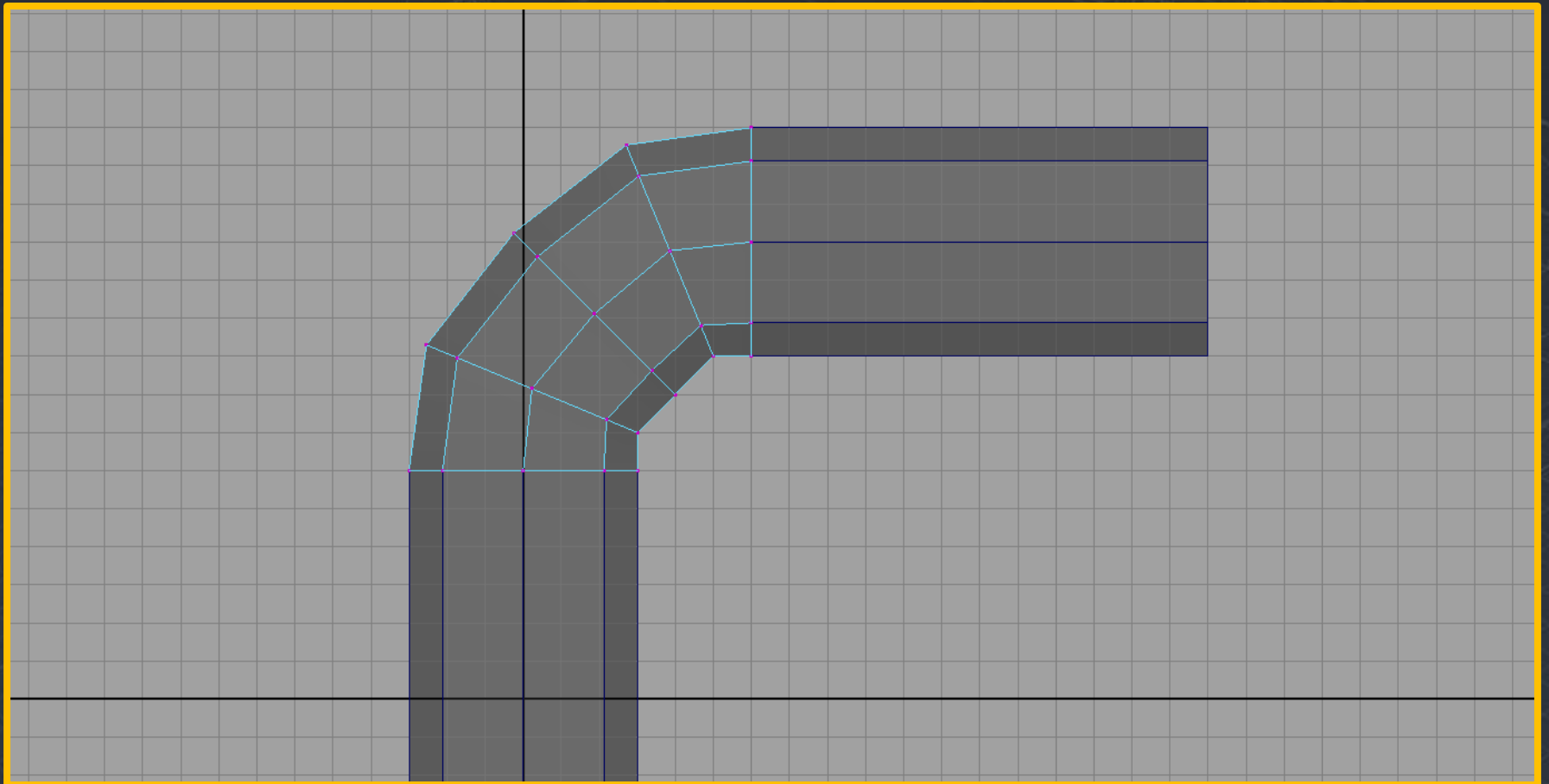
## Changing Subdivisions on Grid



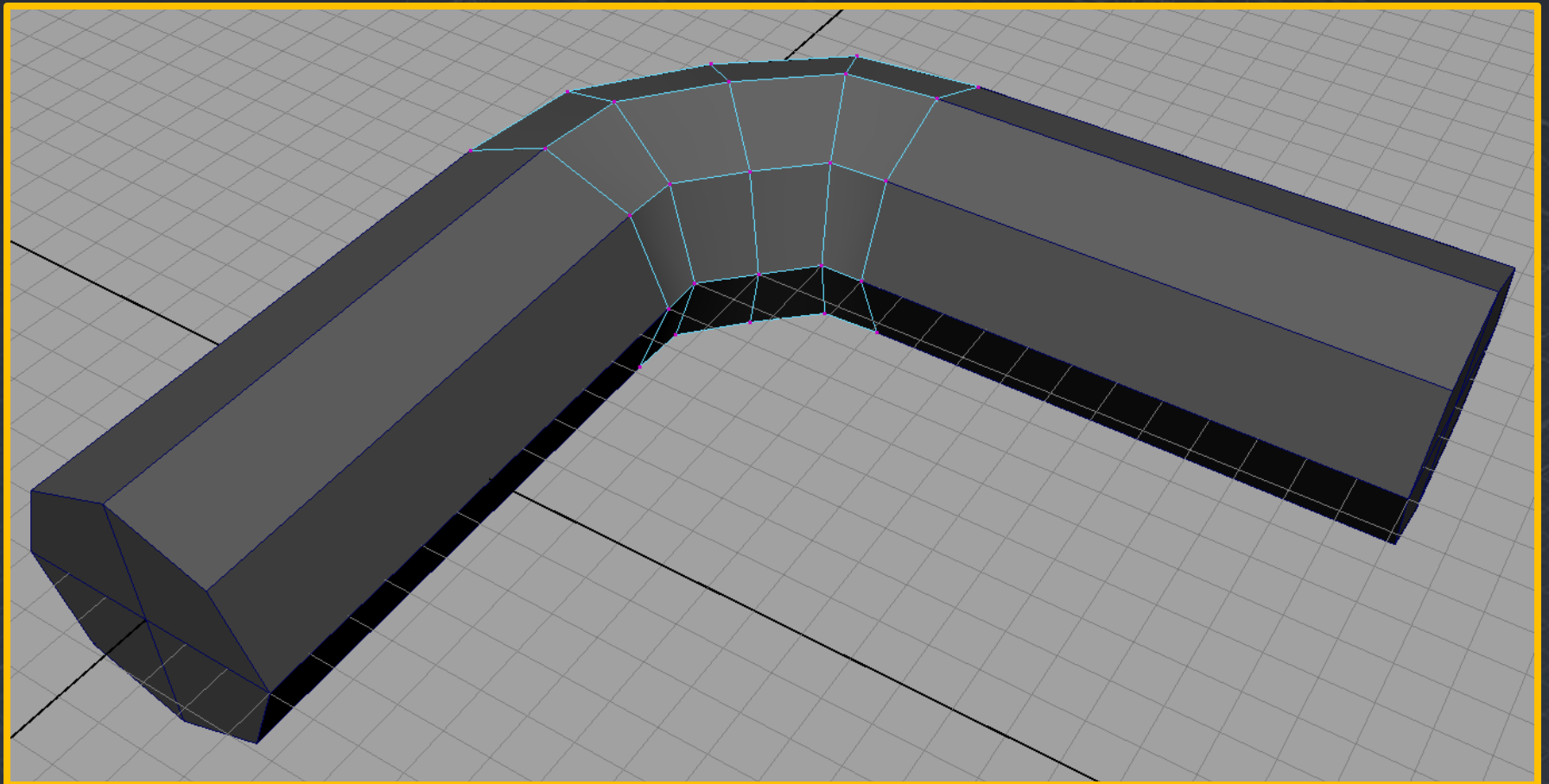
## Use Snap to Grid with modified Pivot points



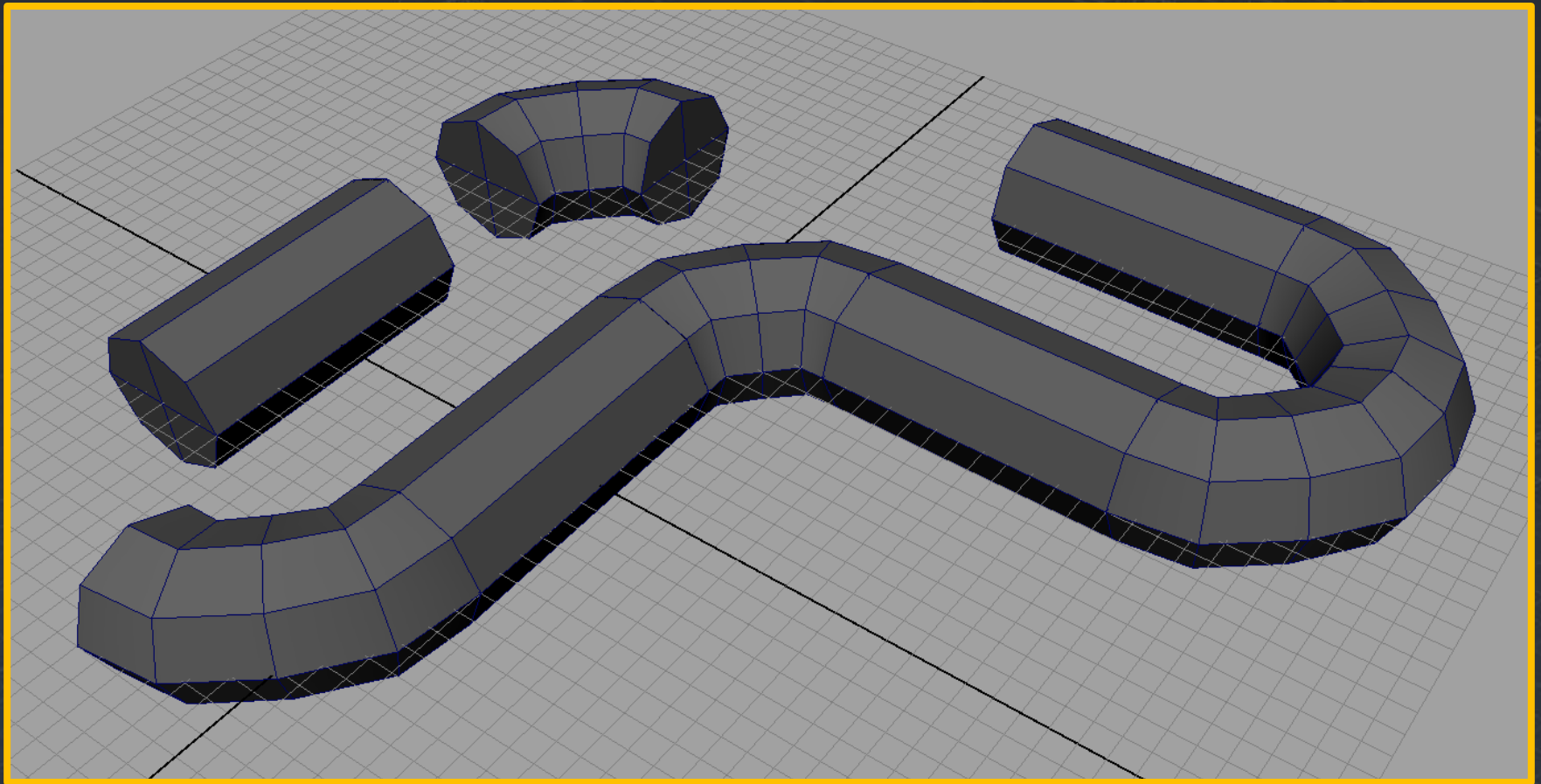
## Completed modular pipe section



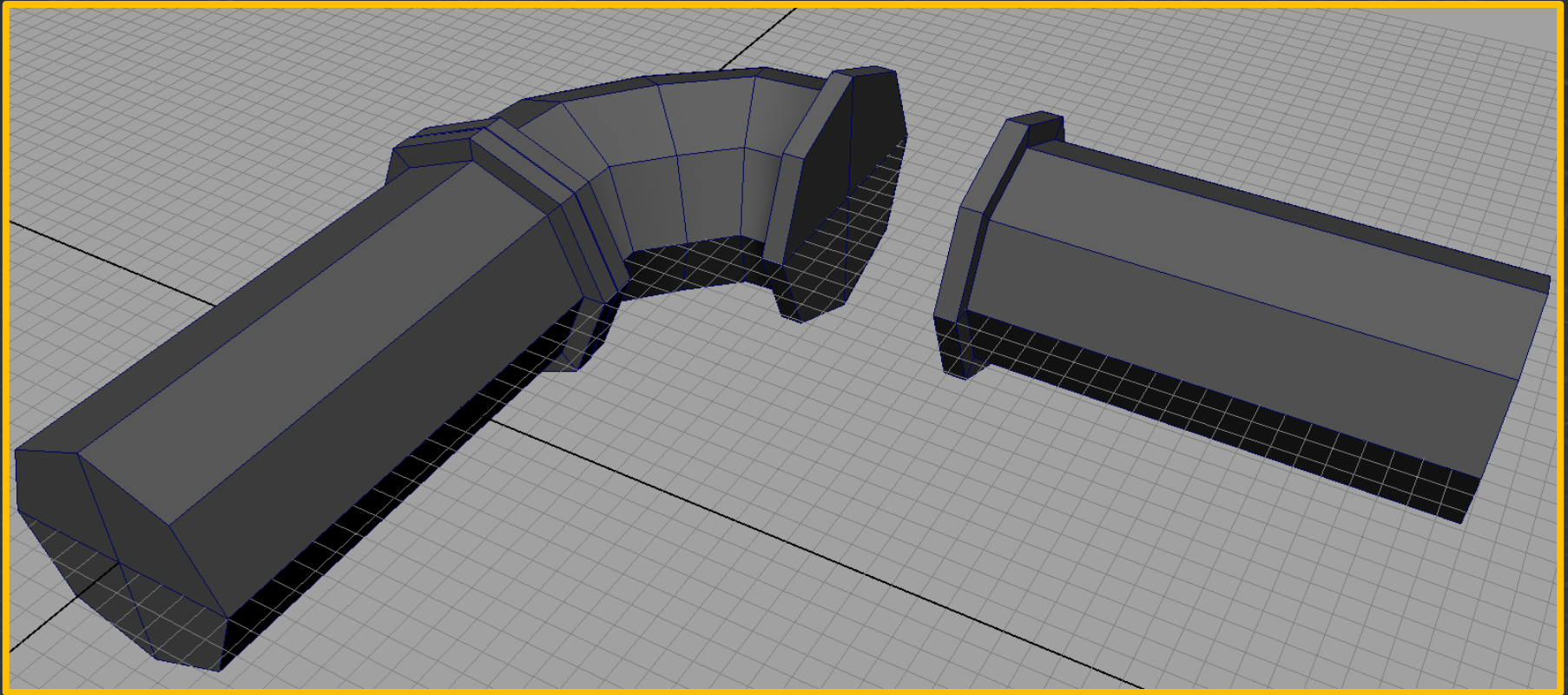
## Completed modular pipe section



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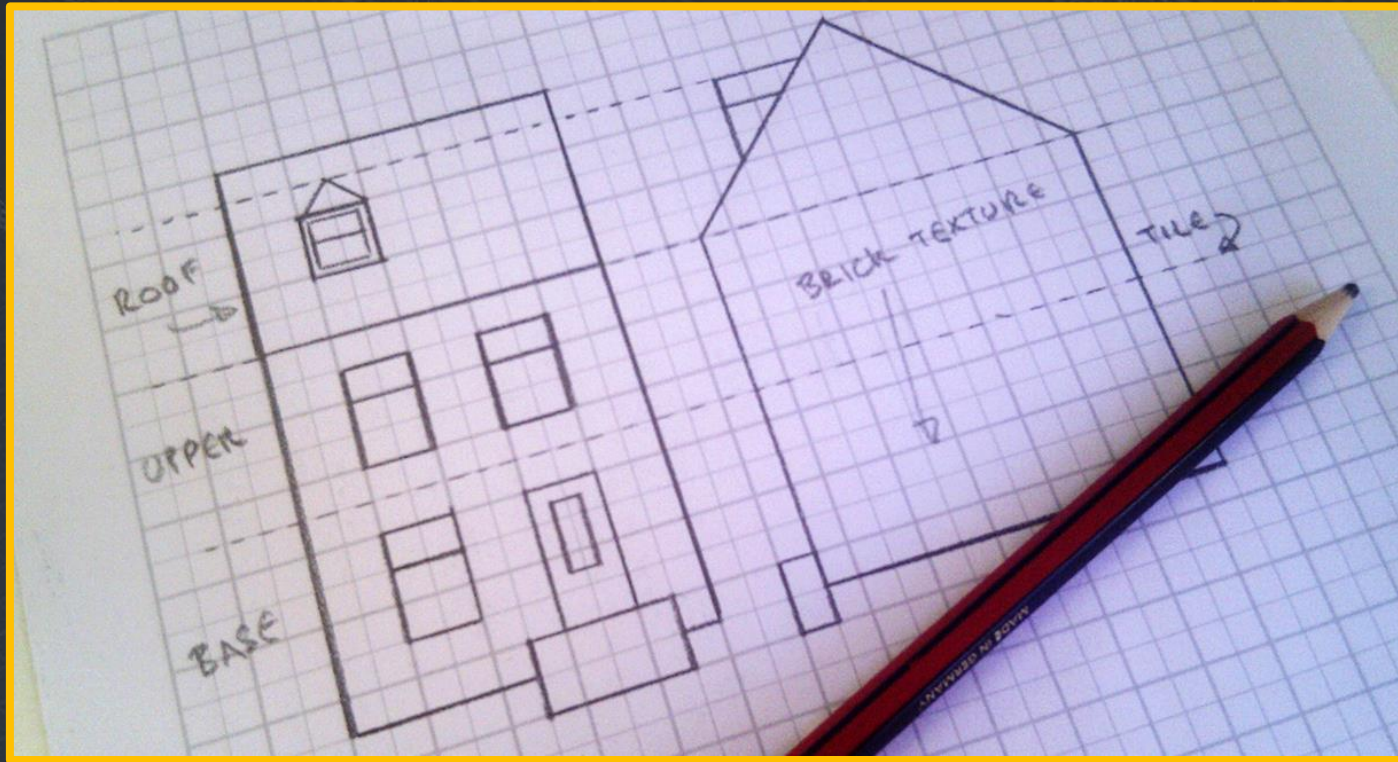


## Modular Assets

- Don't forget to **UV unwrap** your modular asset **BEFORE** duplicating
- Use **SNAP TO GRID** to line up assets
- **Altering the GRID SIZE / SUBDIVISIONS** may be necessary for fine-tuning – but **KEEP A RECORD** of your default grid sizes so you can return to them!
- Use **NAMING CONVENTIONS** to ensure assets are easily identifiable

## Modular Assets

**Remember:** When designing modular assets:



**PRE-PRODUCTION, PLANNING, SQUARED PAPER and SNAP-TO-GRID** are your friends!



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