

.jpg

. stl

. f3d

Quiz Quiz Quiz !

Q2. You should do *this* to make the printer horizontal.
What is *this*?

Leveling

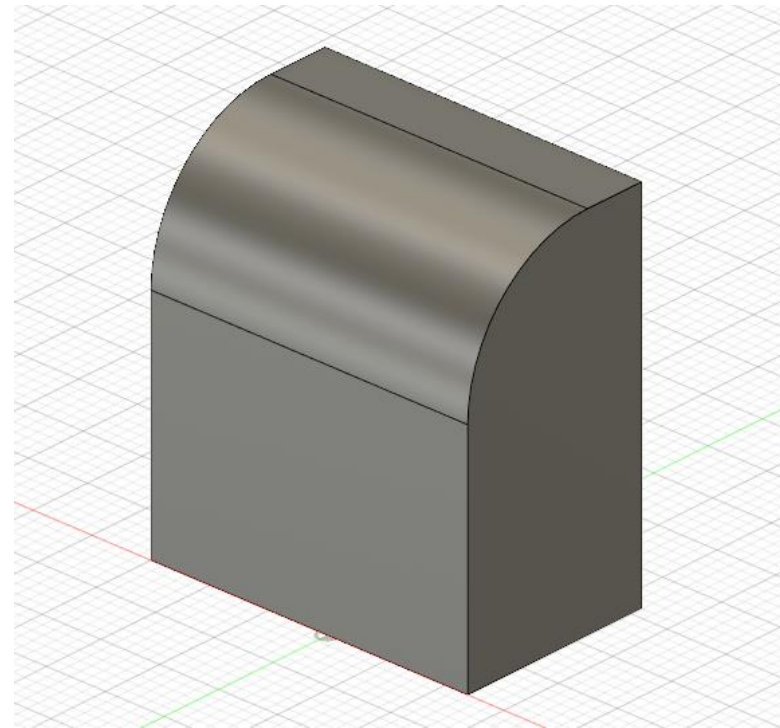
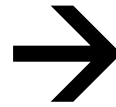
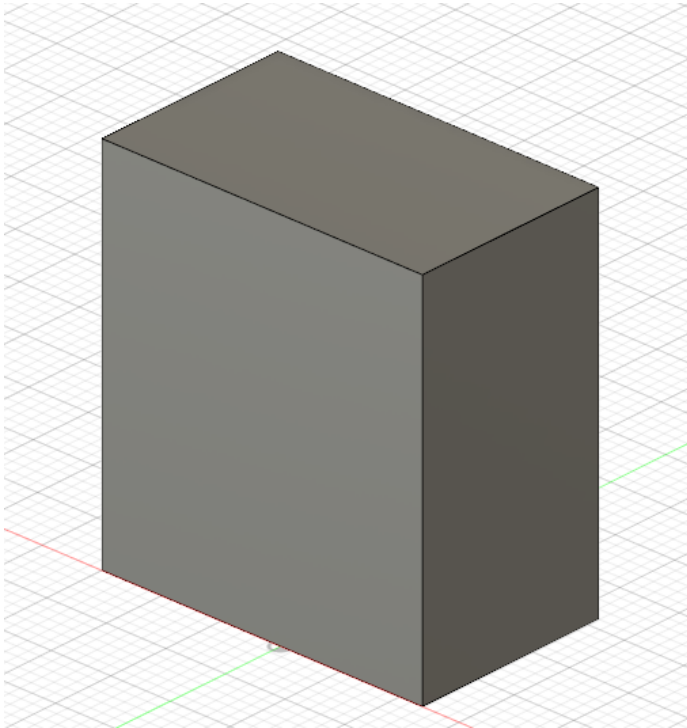
Autohome

Loading

Quiz Quiz

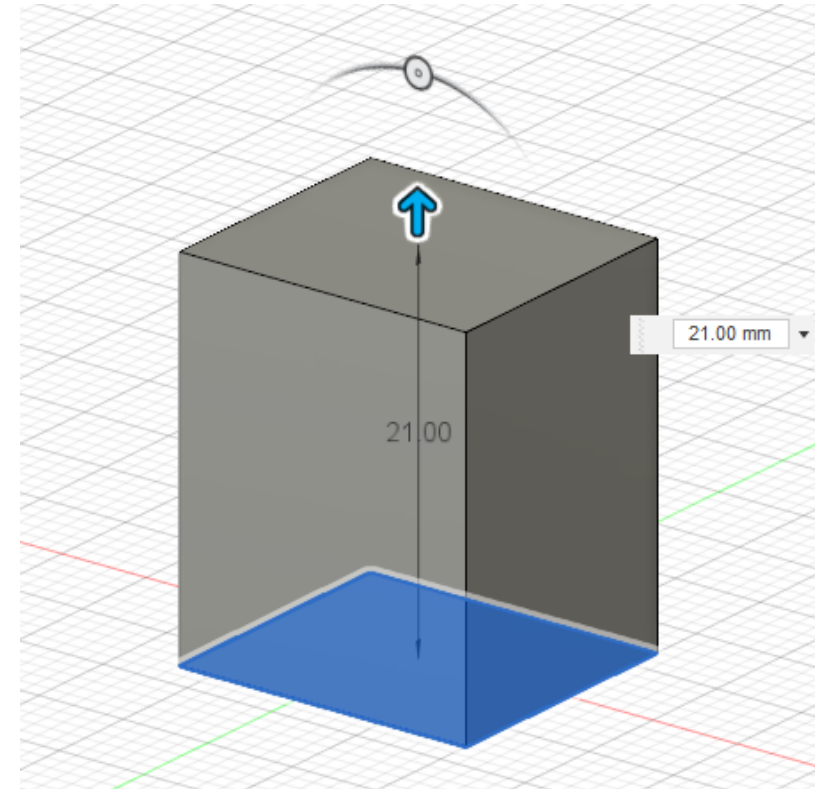
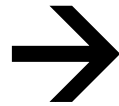
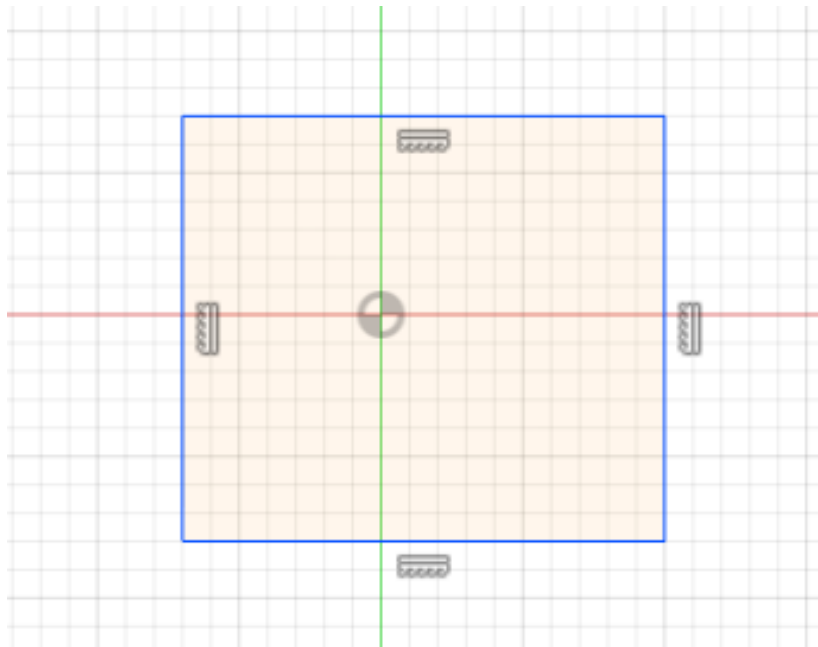
Quiz !

Q3. Which tool is used for this change?

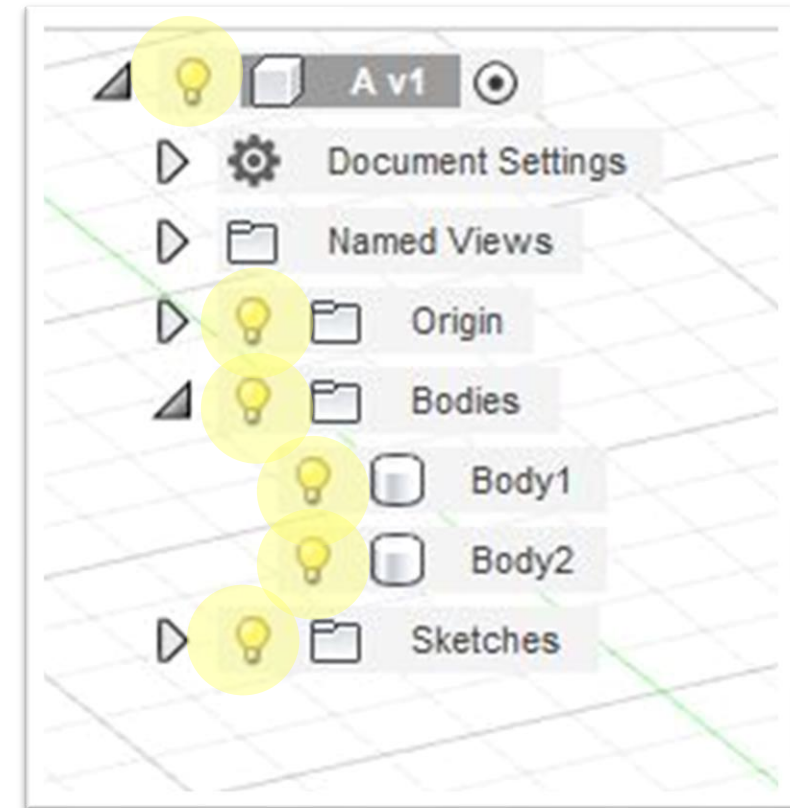
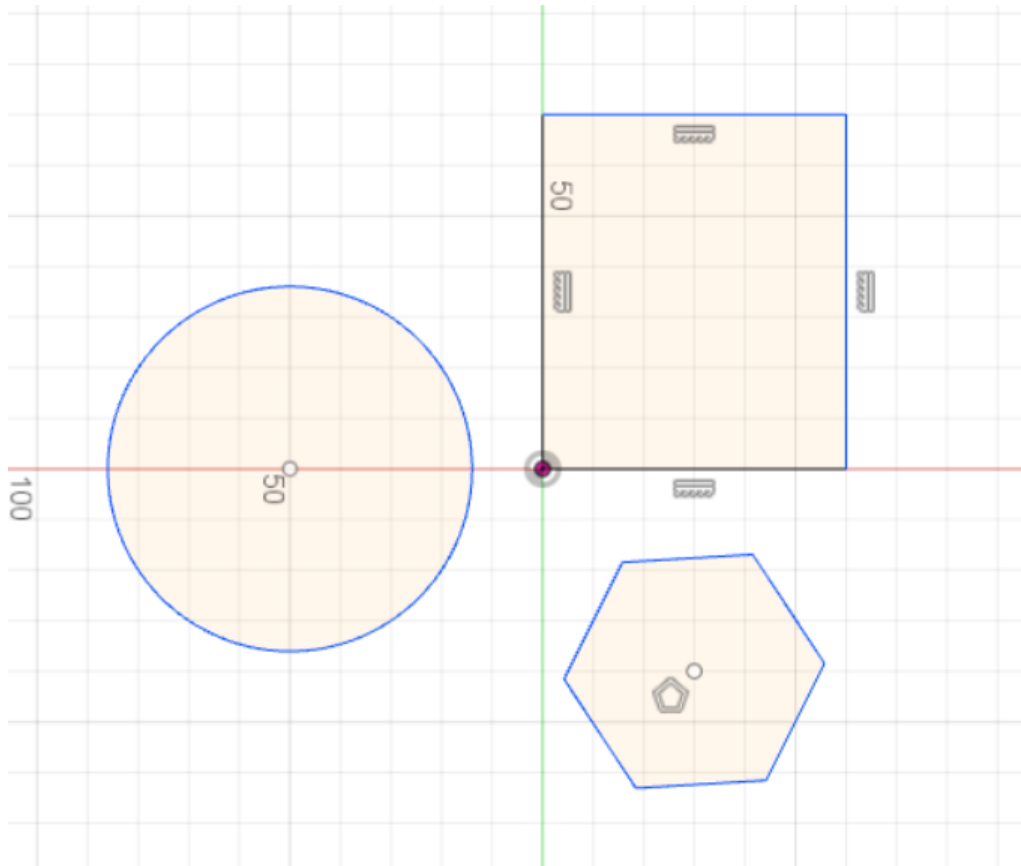


Quiz Quiz Quiz !

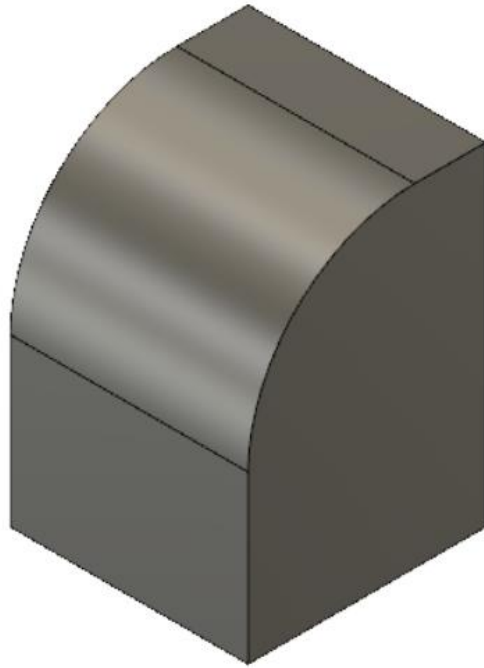
Q4. Which tool is used for this change?



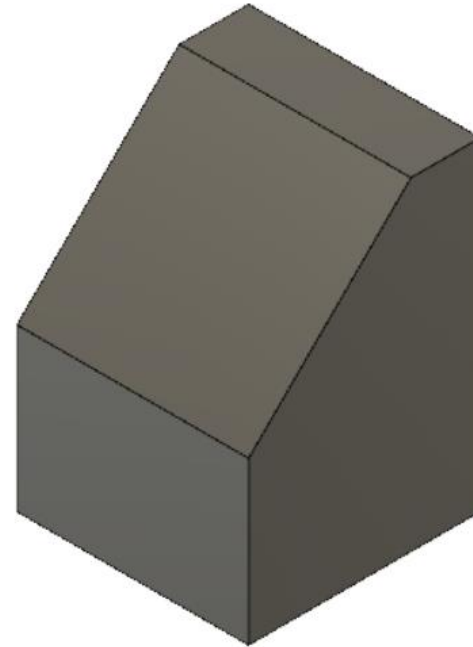
Review



Review



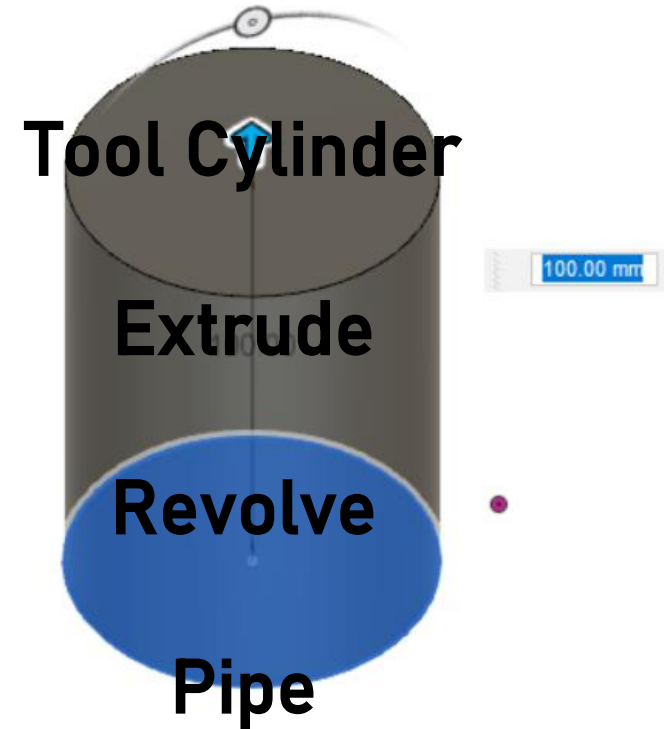
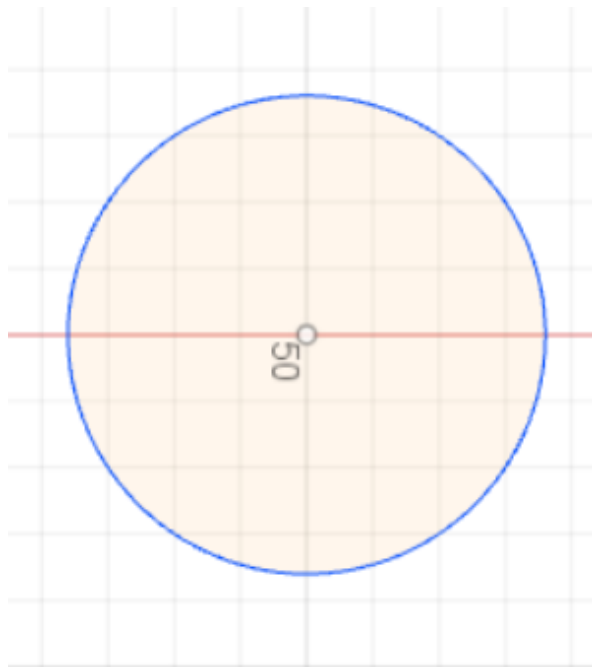
Fillet [F]



Chamfer

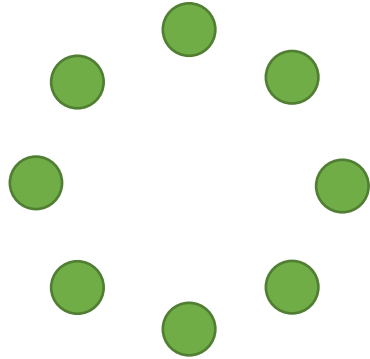
Review

< The Ways of Building Cylinder >

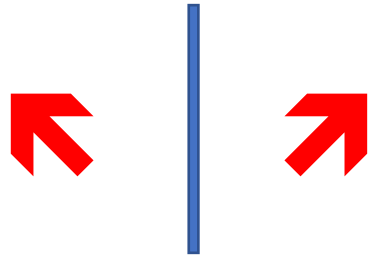


Review

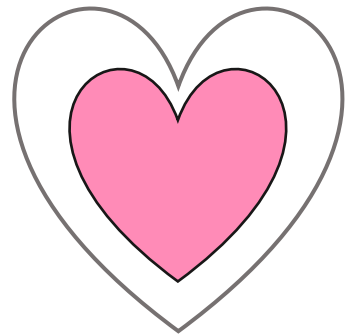
pattern



mirror



offset



< The Ways of Building Cylinder >

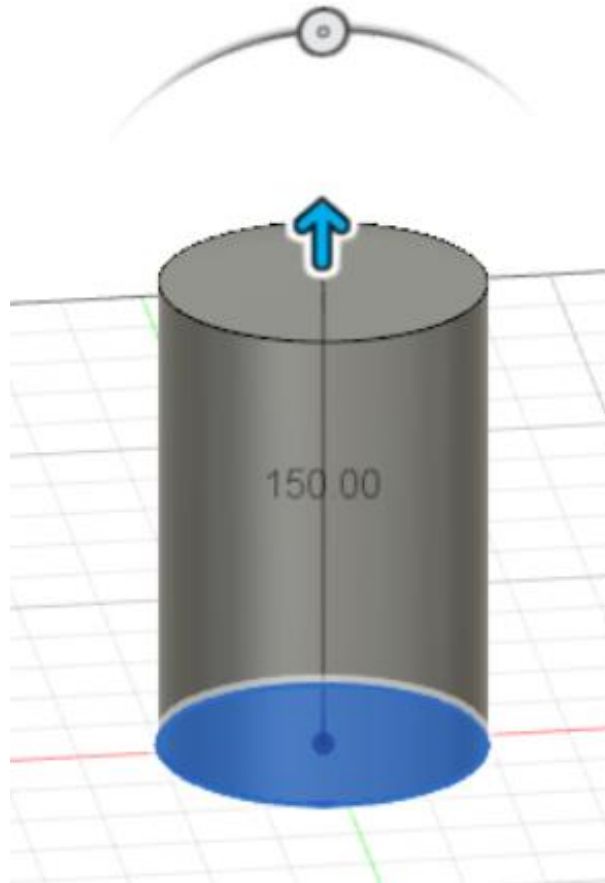
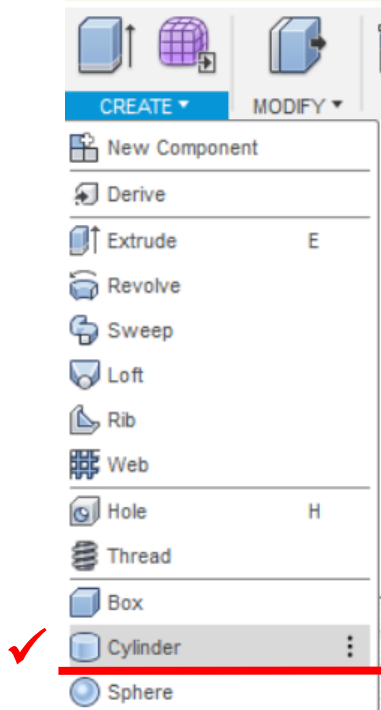
Tool Cylinder

Extrude

Revolve

Pipe

Review



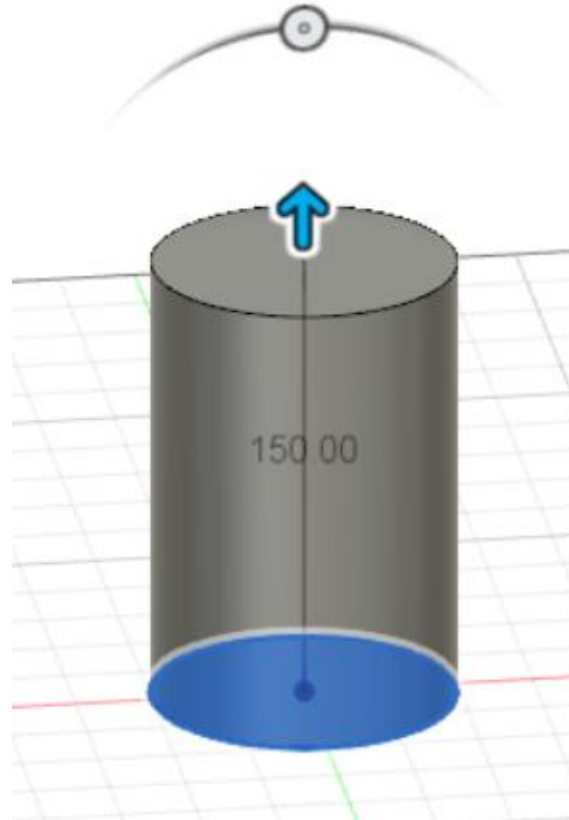
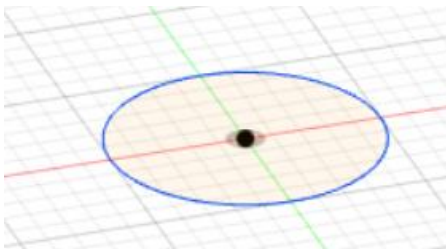
1. Tool Cylinder

[Create] → Cylinder

The Ways of Building Cylinder

Review

Sketch Circle



2. Extrude

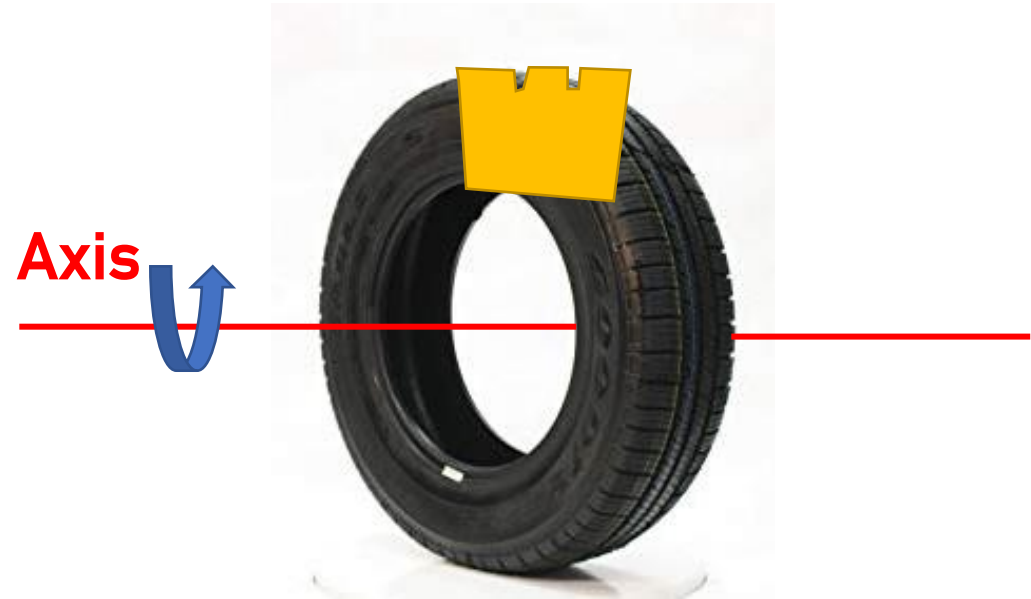
[Sketch] → Circle

[Create] → Extrude

The Ways of Building Cylinder

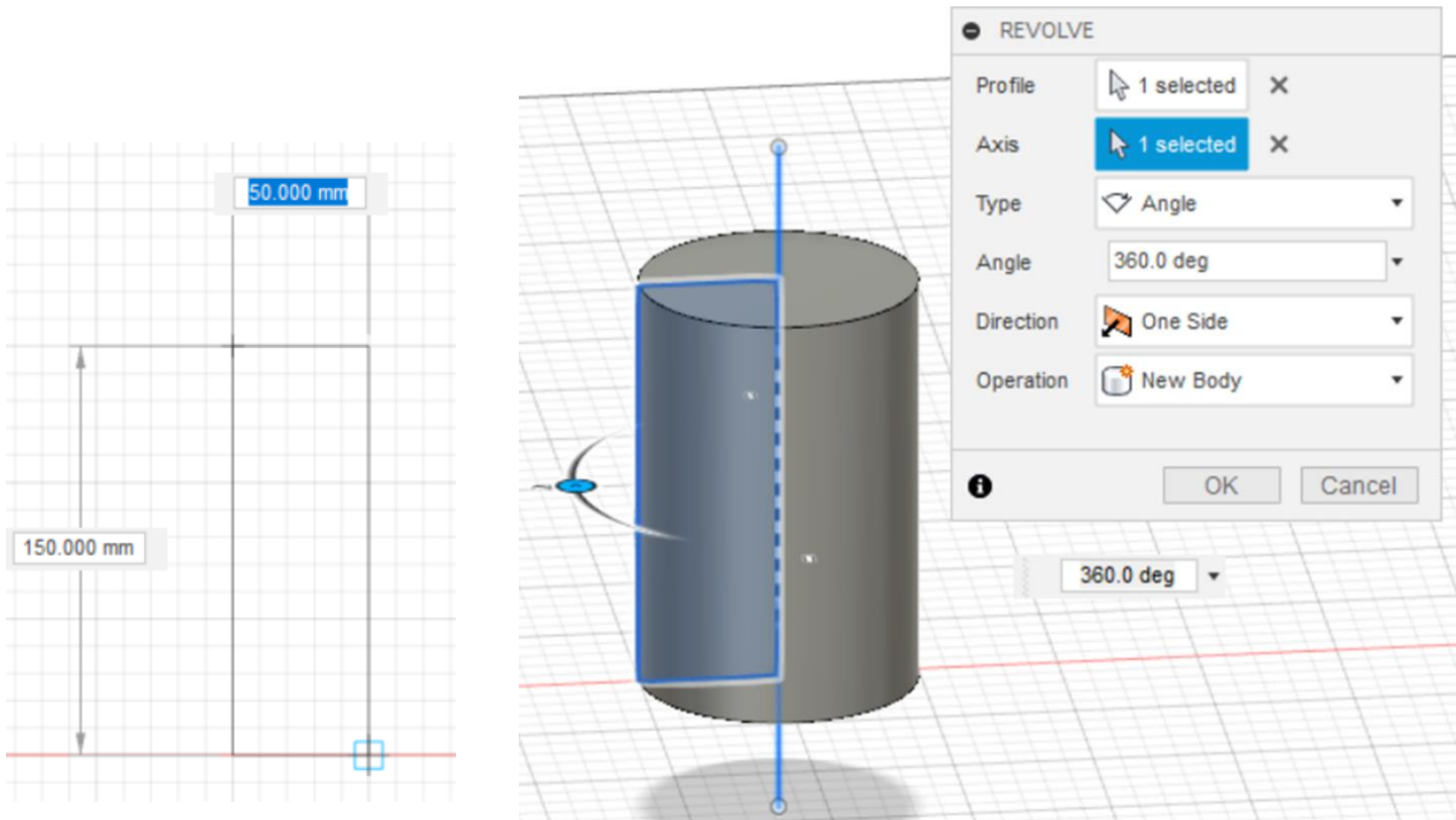
Revolve

3. Revolve



The Ways of Building Cylinder

Revolve



3. Revolve

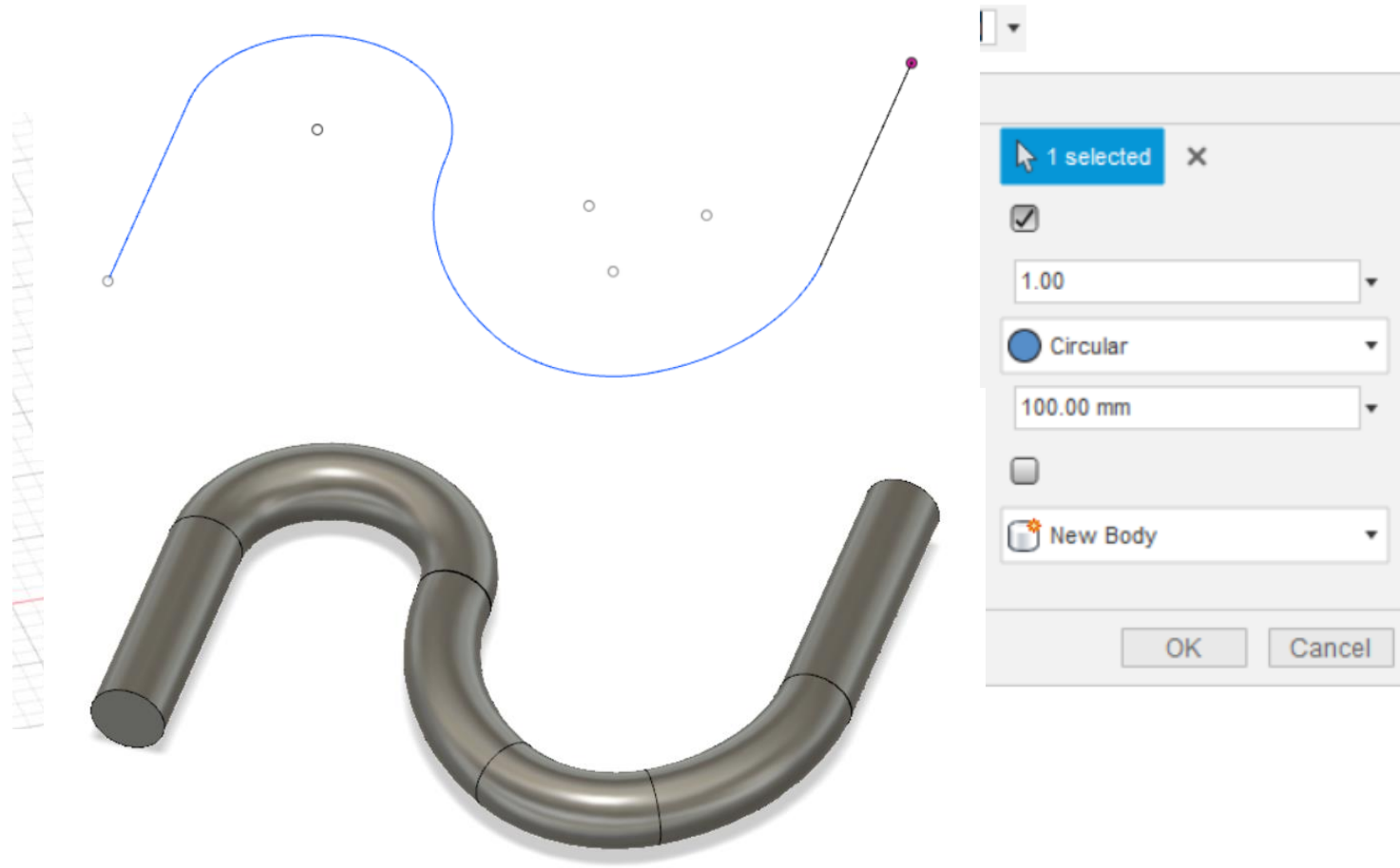
[Sketch] → Rectangle

[Sketch] → Line

[Create] → Revolve

The Ways of Building Cylinder

Pipe



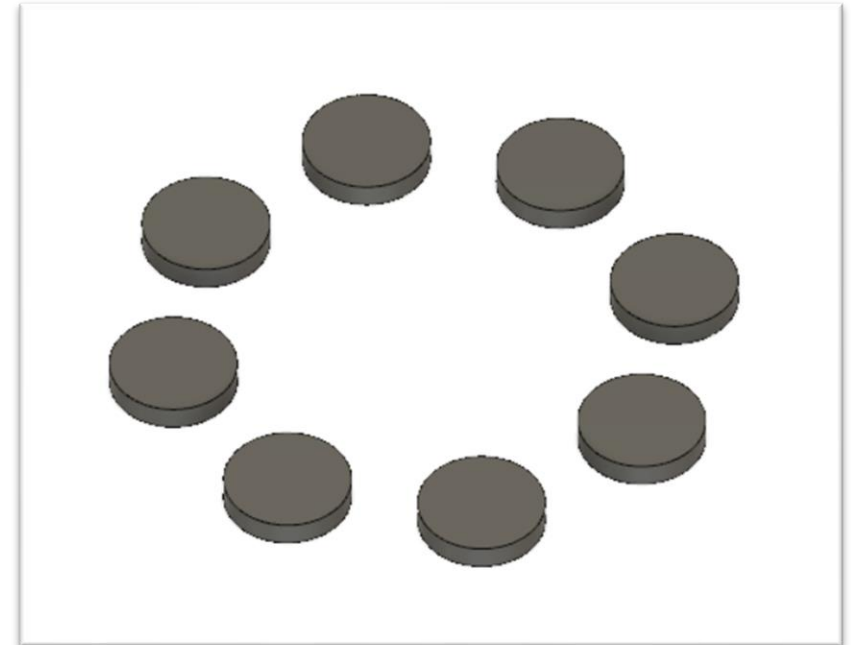
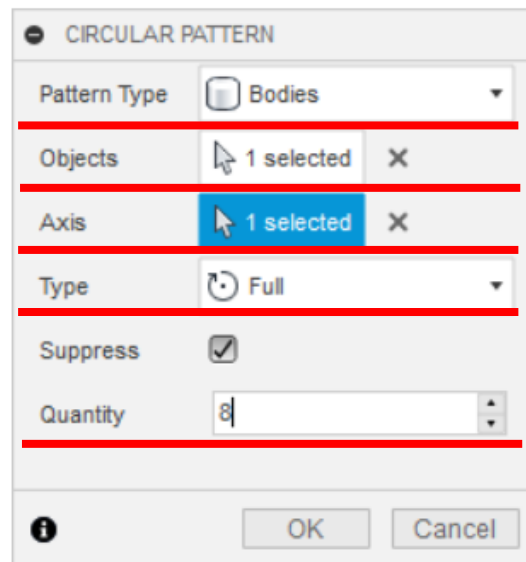
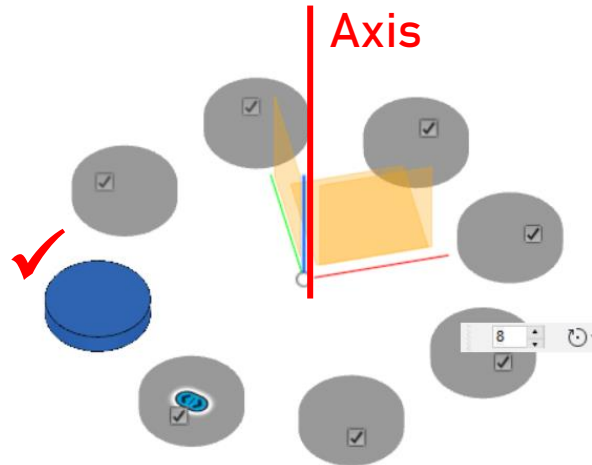
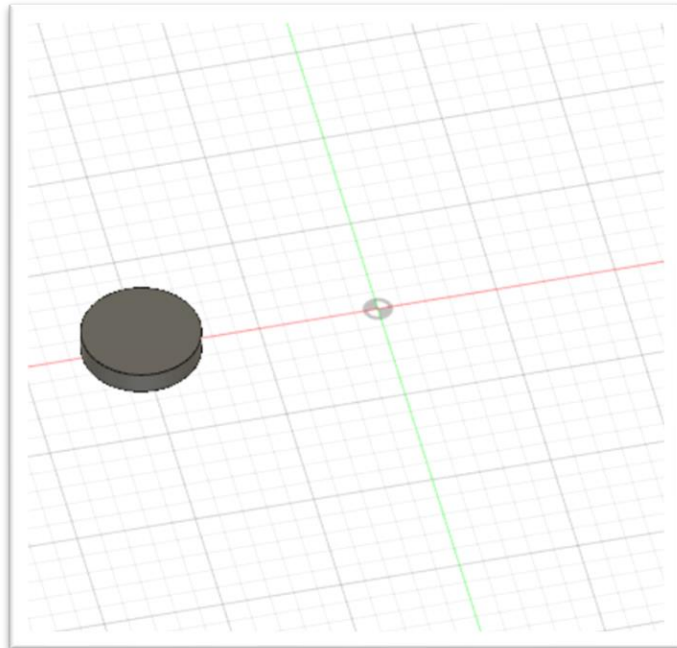
4. Pipe

[Sketch] → Line

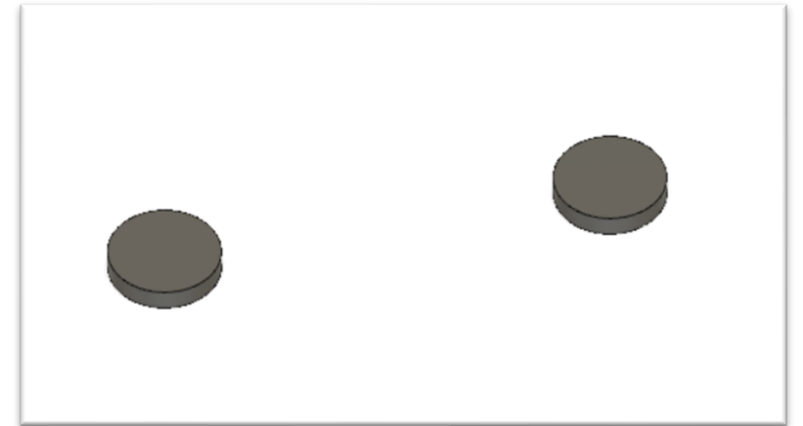
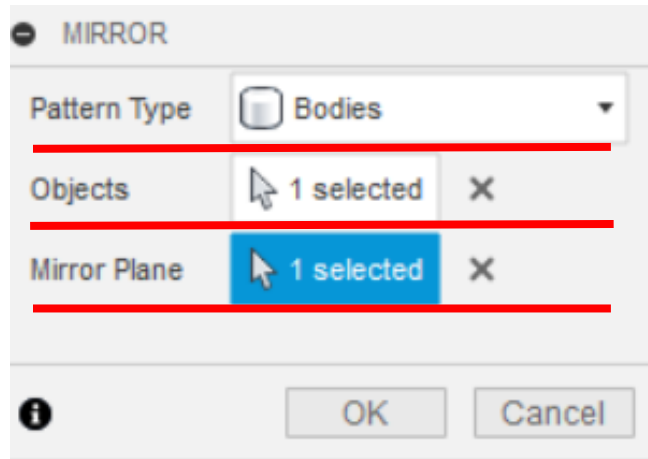
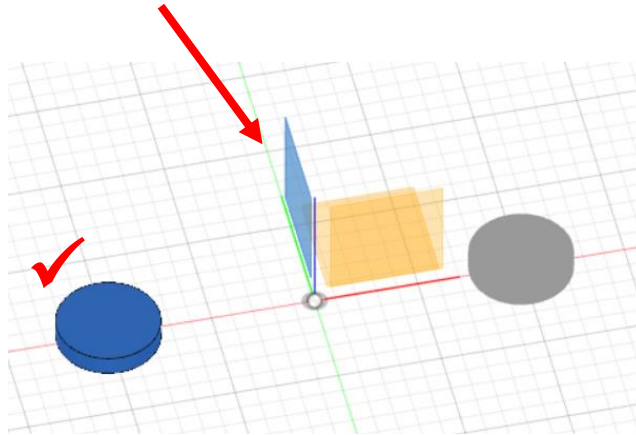
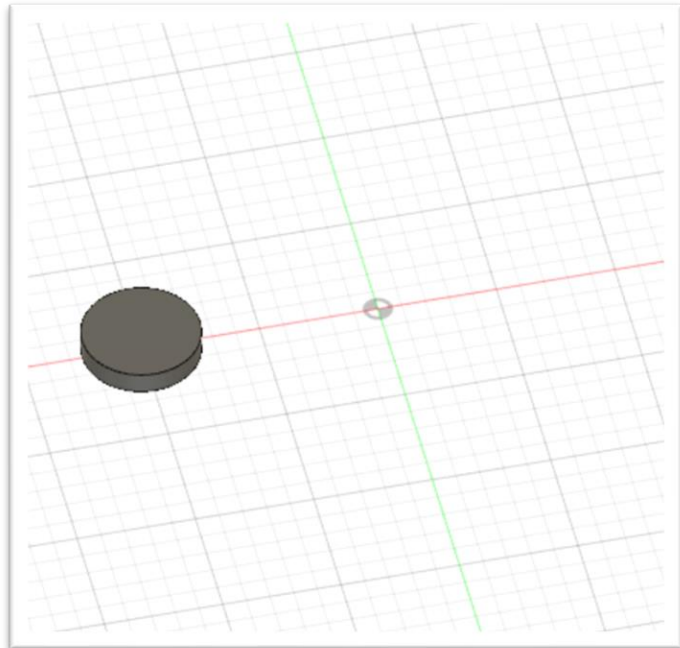
[Create] → Pipe

The Ways of Building Cylinder

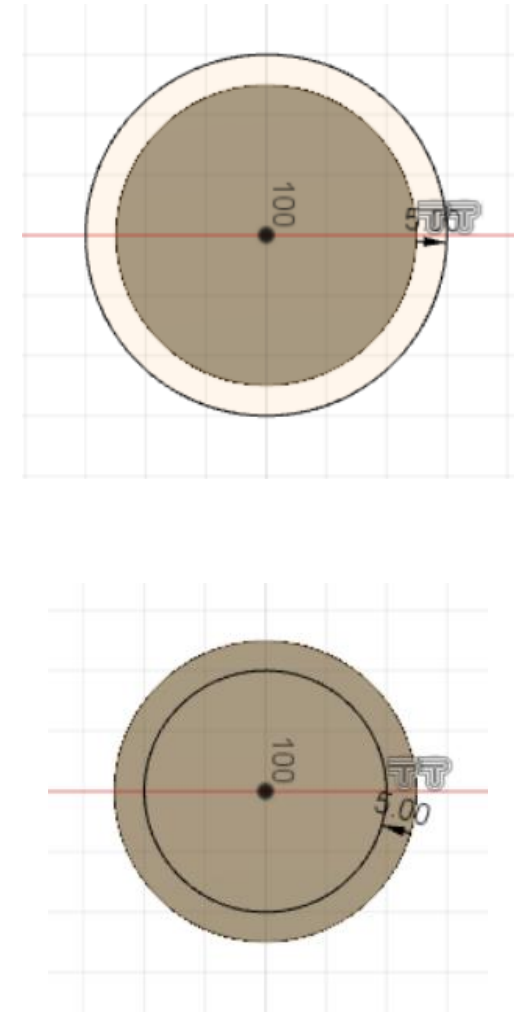
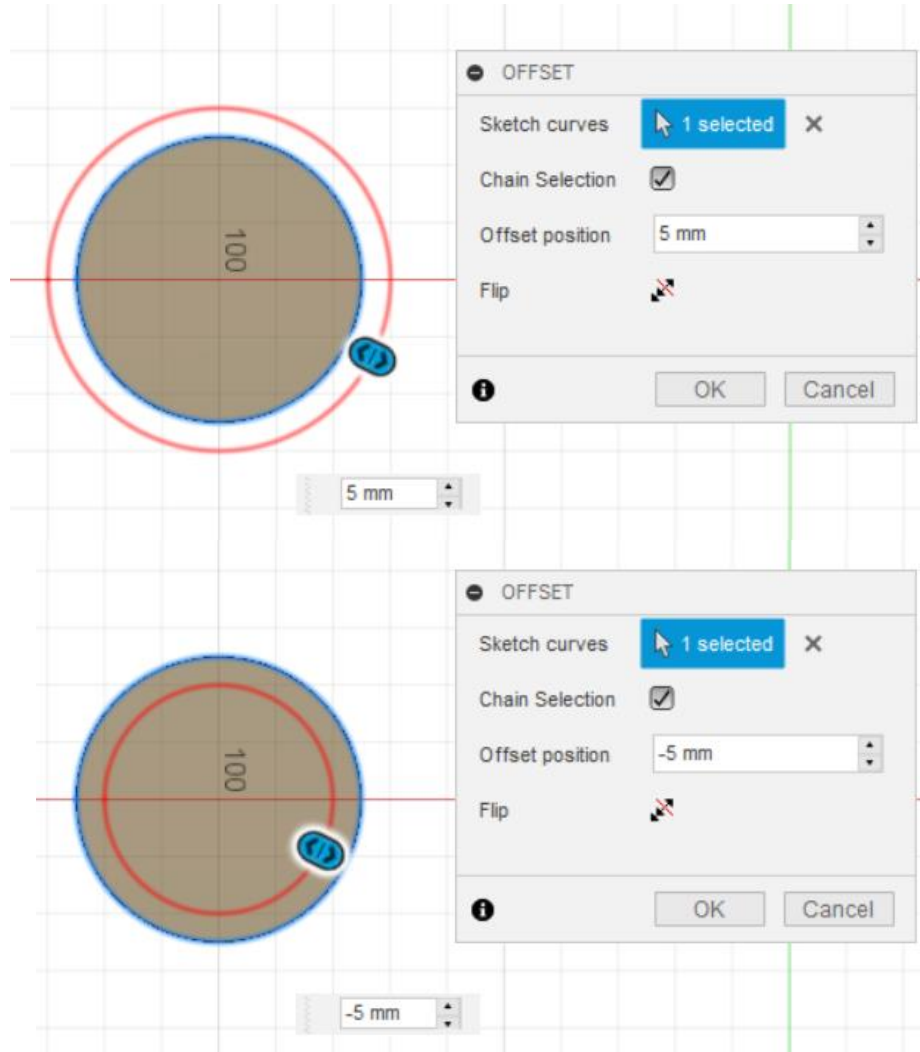
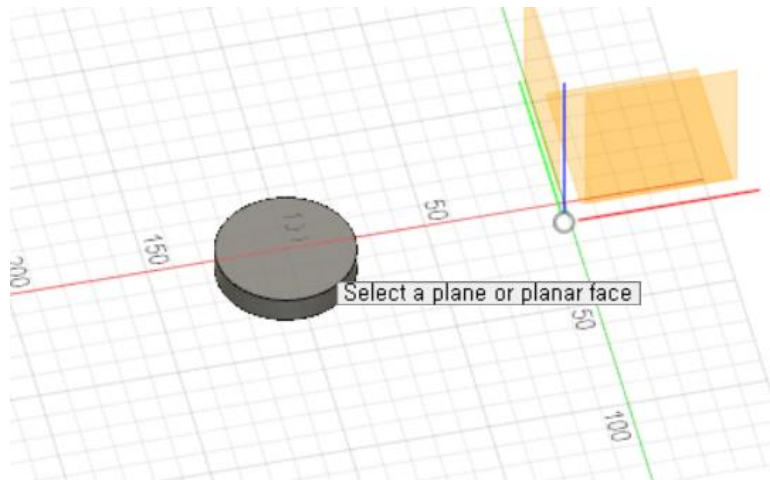
Pattern



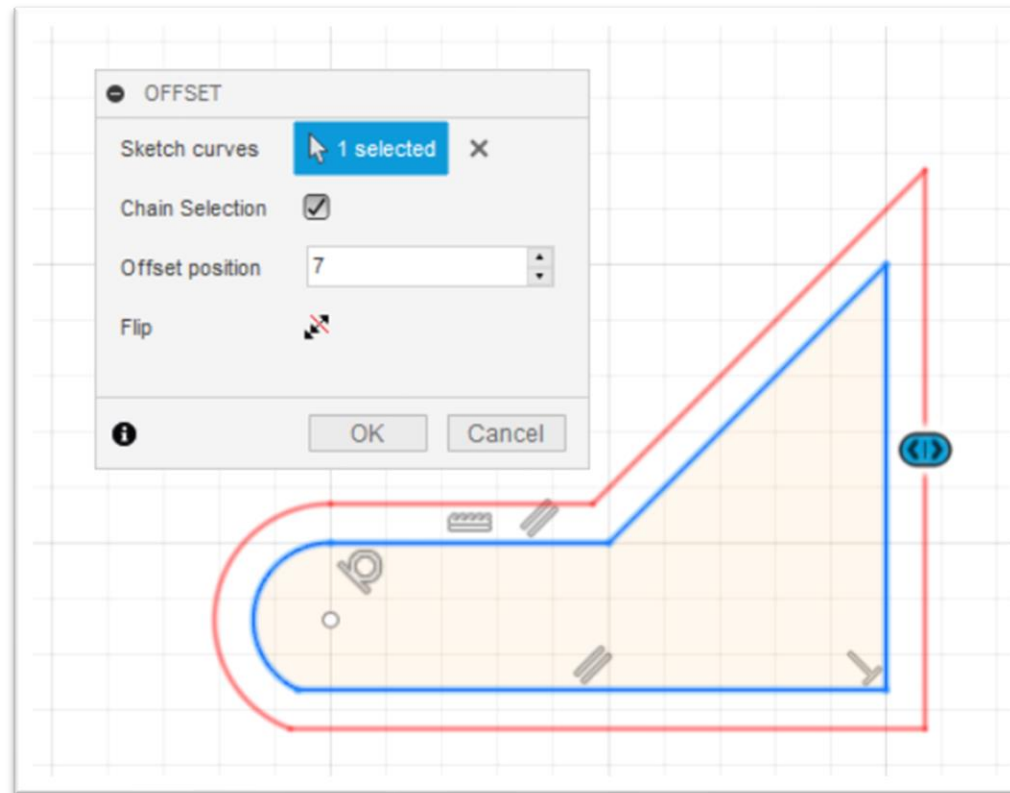
Mirror



Offset



Offset

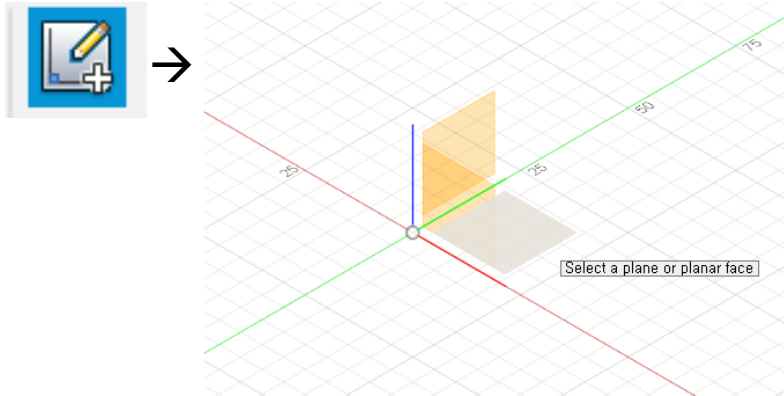


Exercise 2: making <MUG CUP>



Step 1 : sketch circle

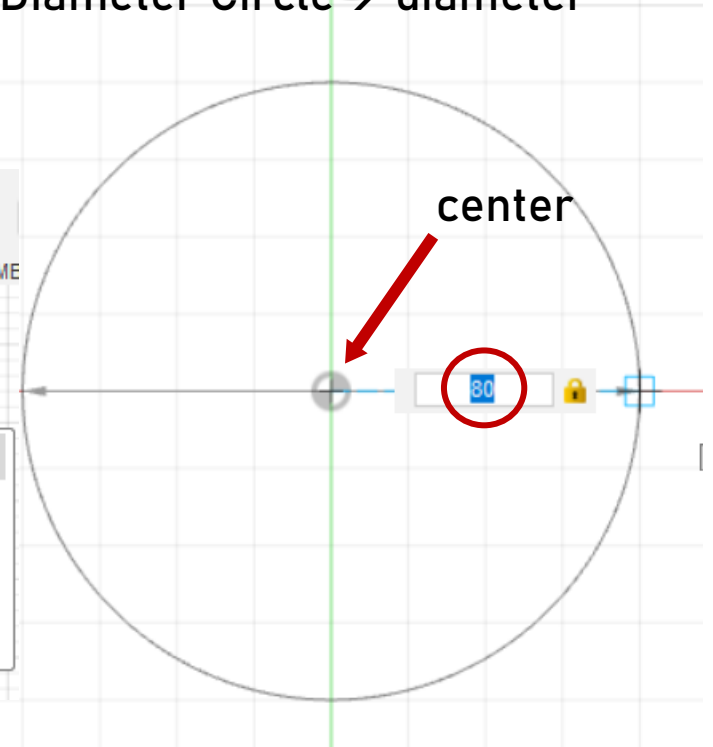
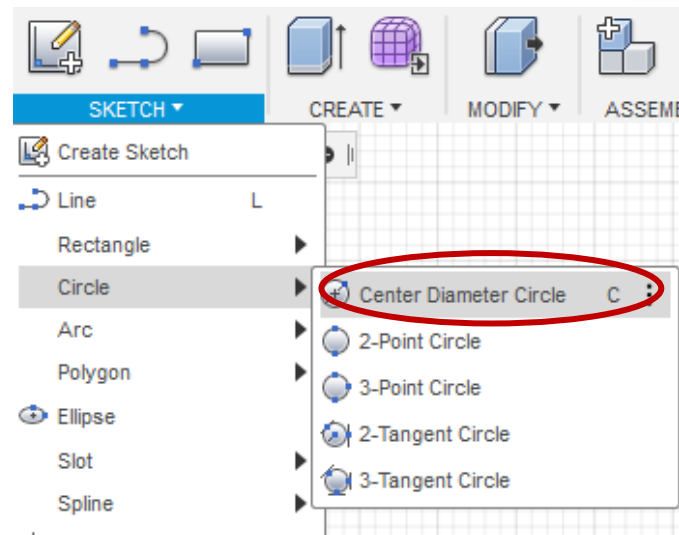
1) Create sketch → select xy plane



3) Click [Stop sketch]!

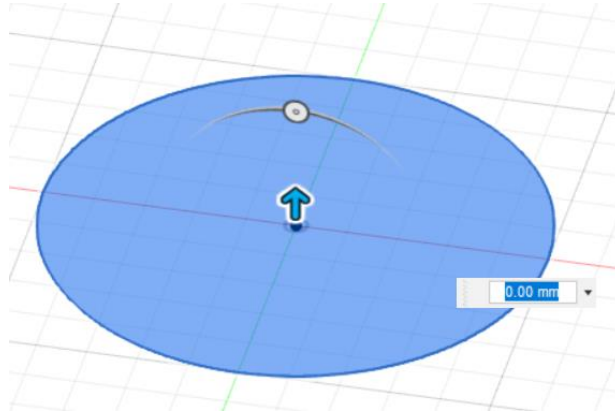
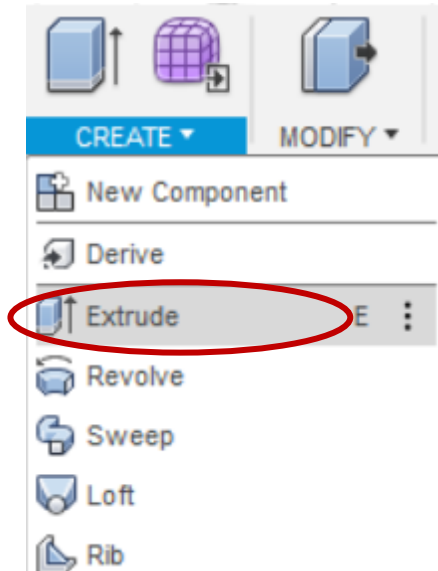


2) SKETCH → Circle → Center Diameter Circle → diameter = 100mm

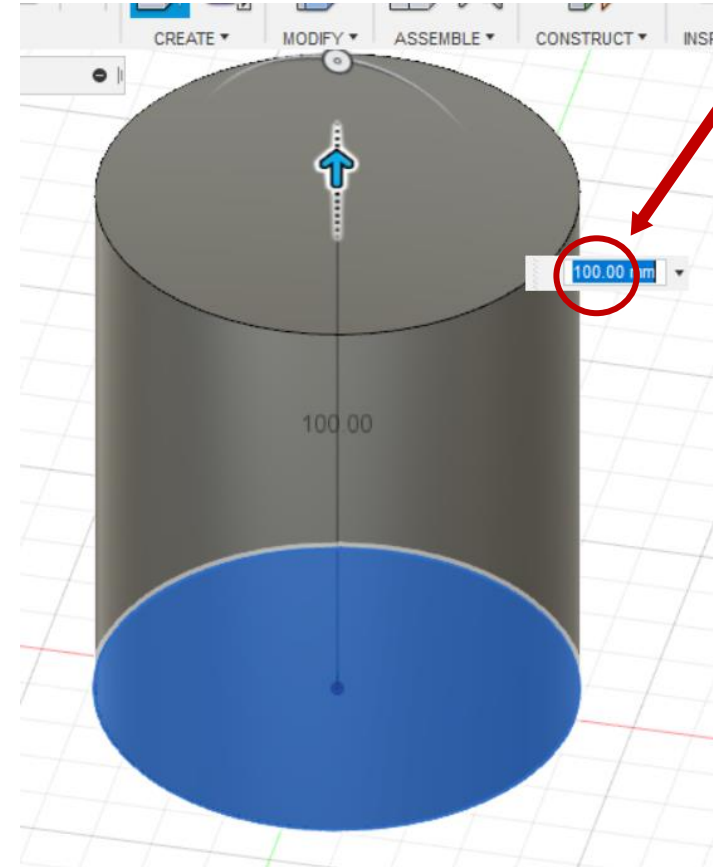


Step 2 : Extrude

2) [Create] → Extrude

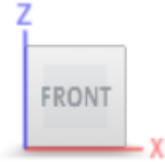


2) Extrude 100mm



Step 3: Draw Arc

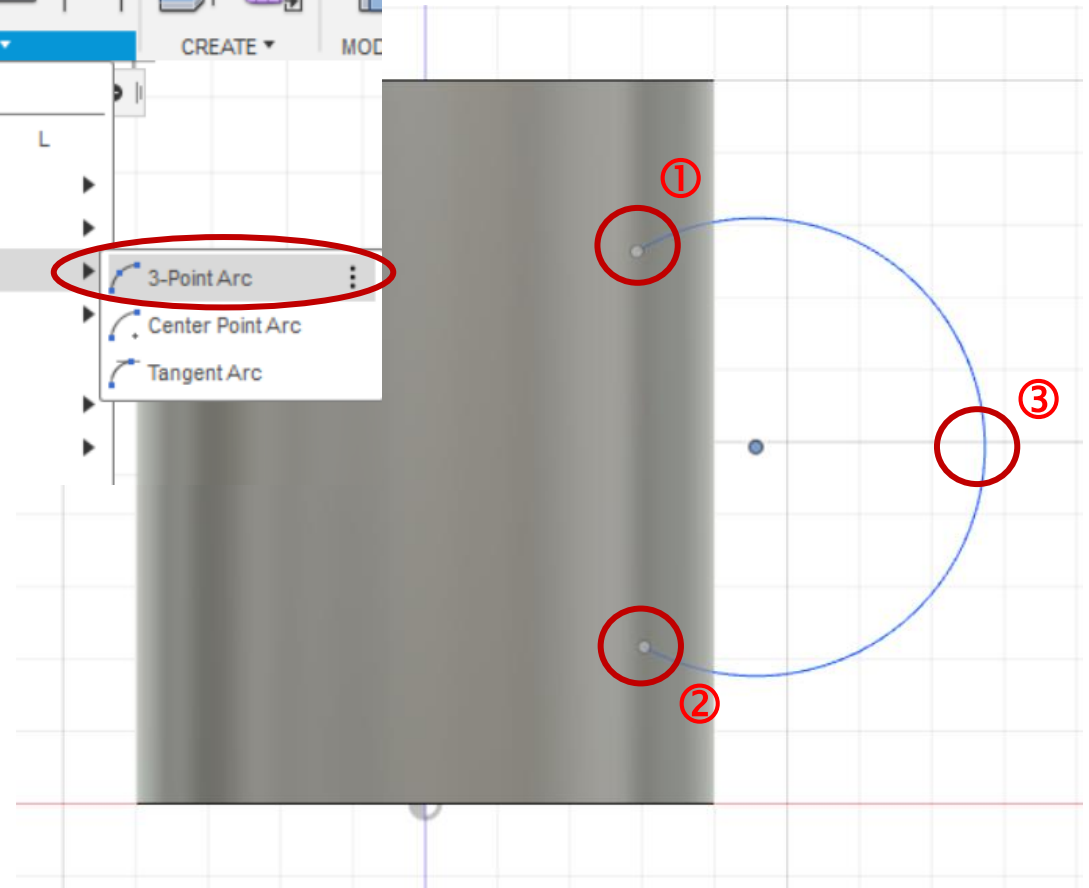
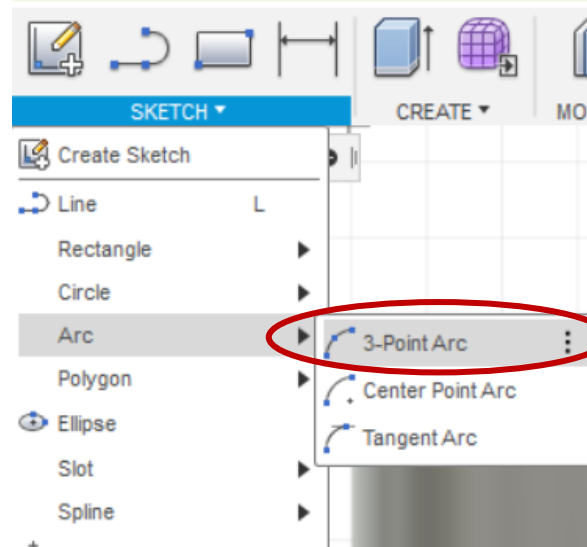
1) [Create sketch] → select xy plane



3) Click [Stop sketch]!



2) [Sketch]→ Arc→ **3-Point Arc**

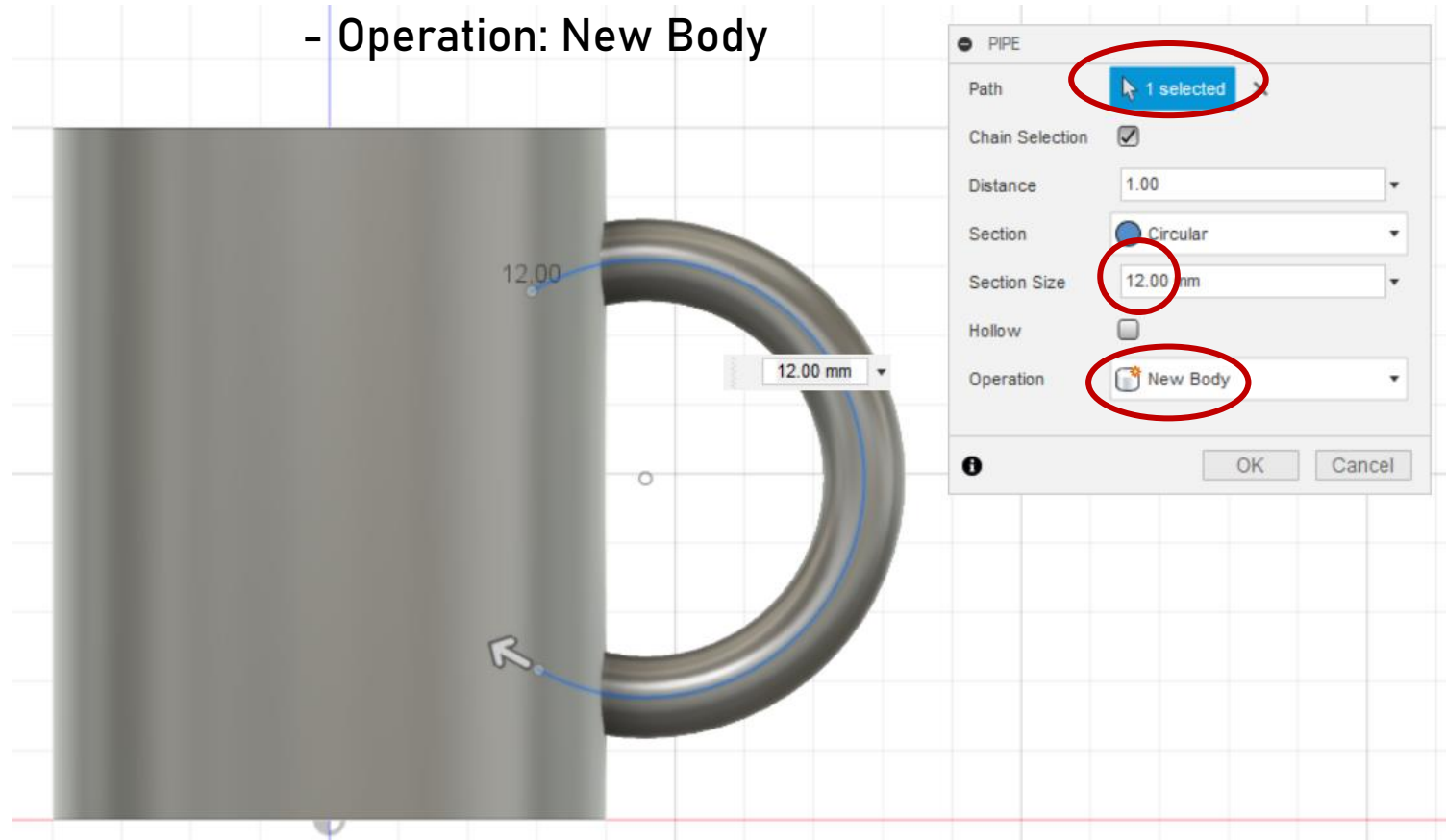


Step 4 : Pipe

1) [Create] →
Pipe



2) - Select Path
- Section Size: 10mm
- Operation: New Body

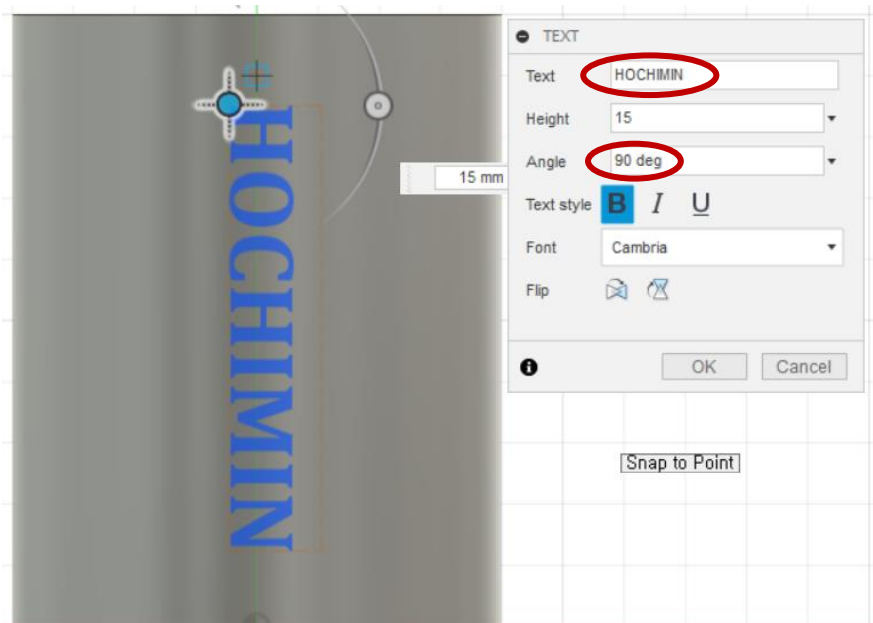


Step 5: Text Sketch

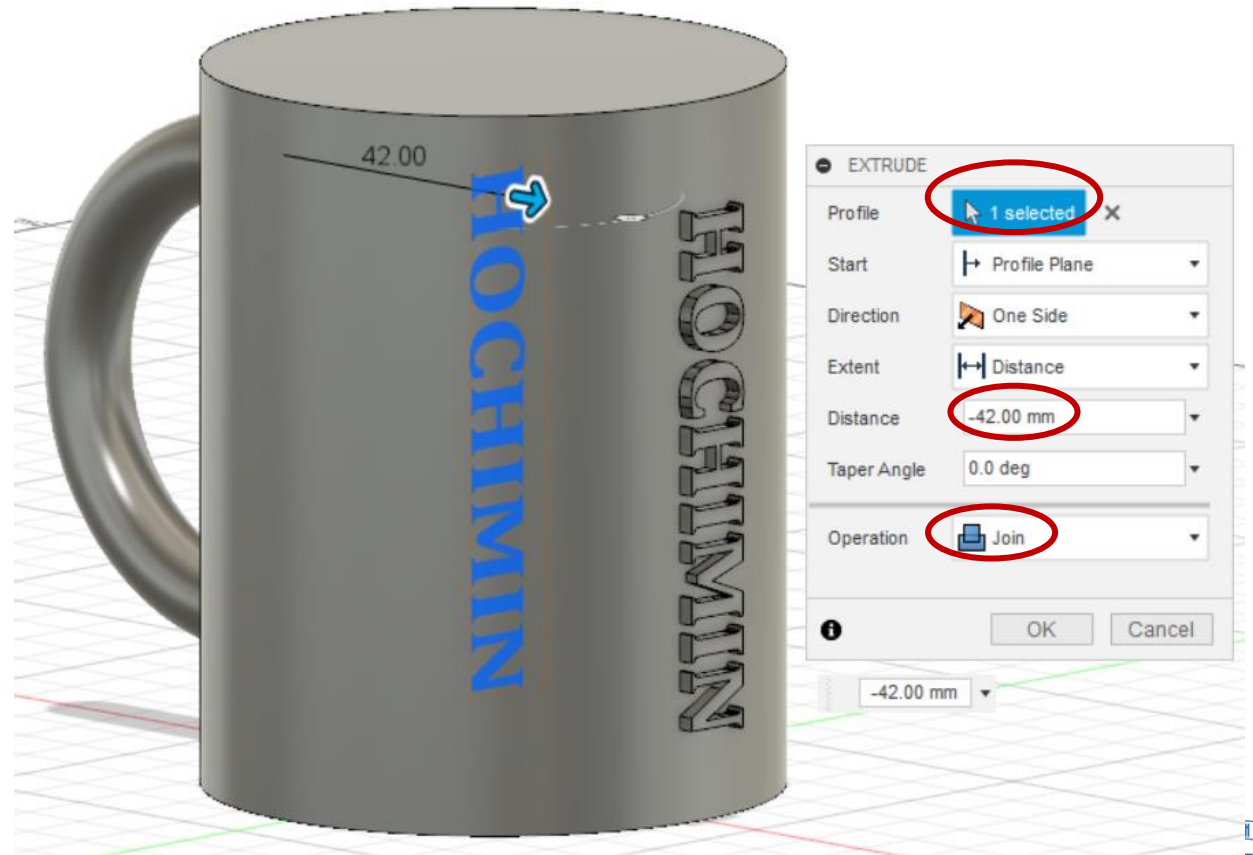
1) [Create sketch] → select YZ plane



2) - Text the word/// Angle: 90deg →

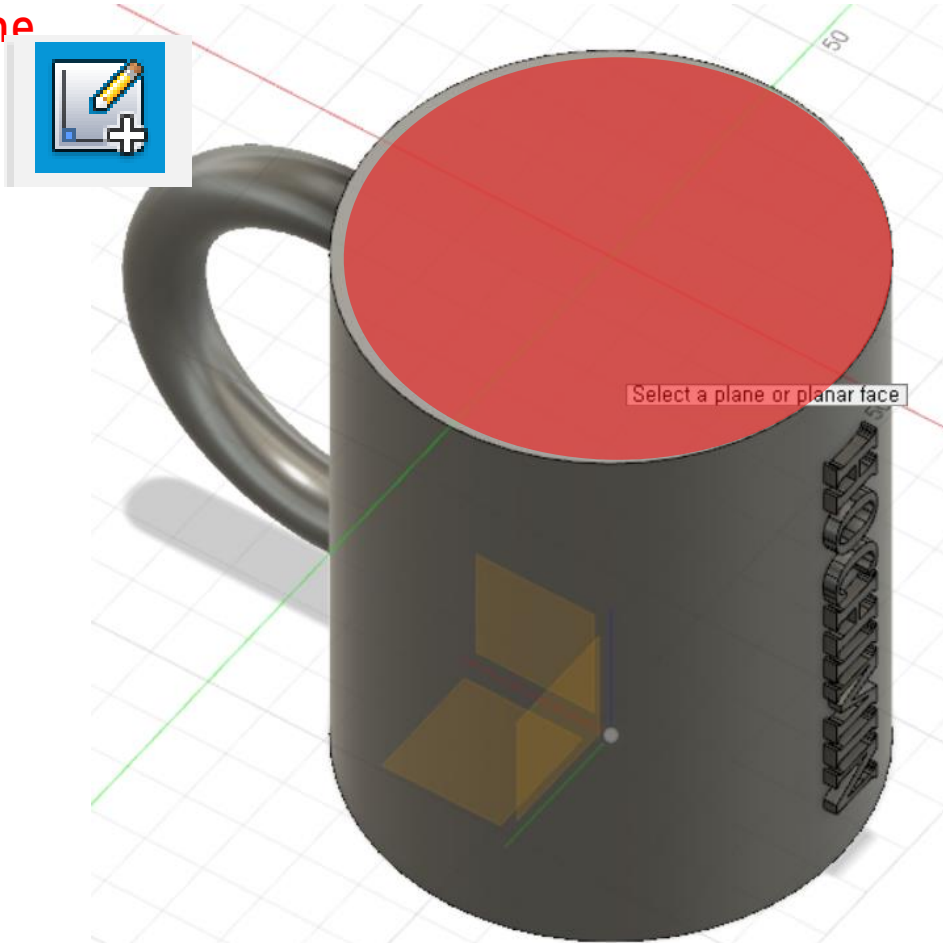


3) - Select the text
- Distance: -42mm
- Operation: Join

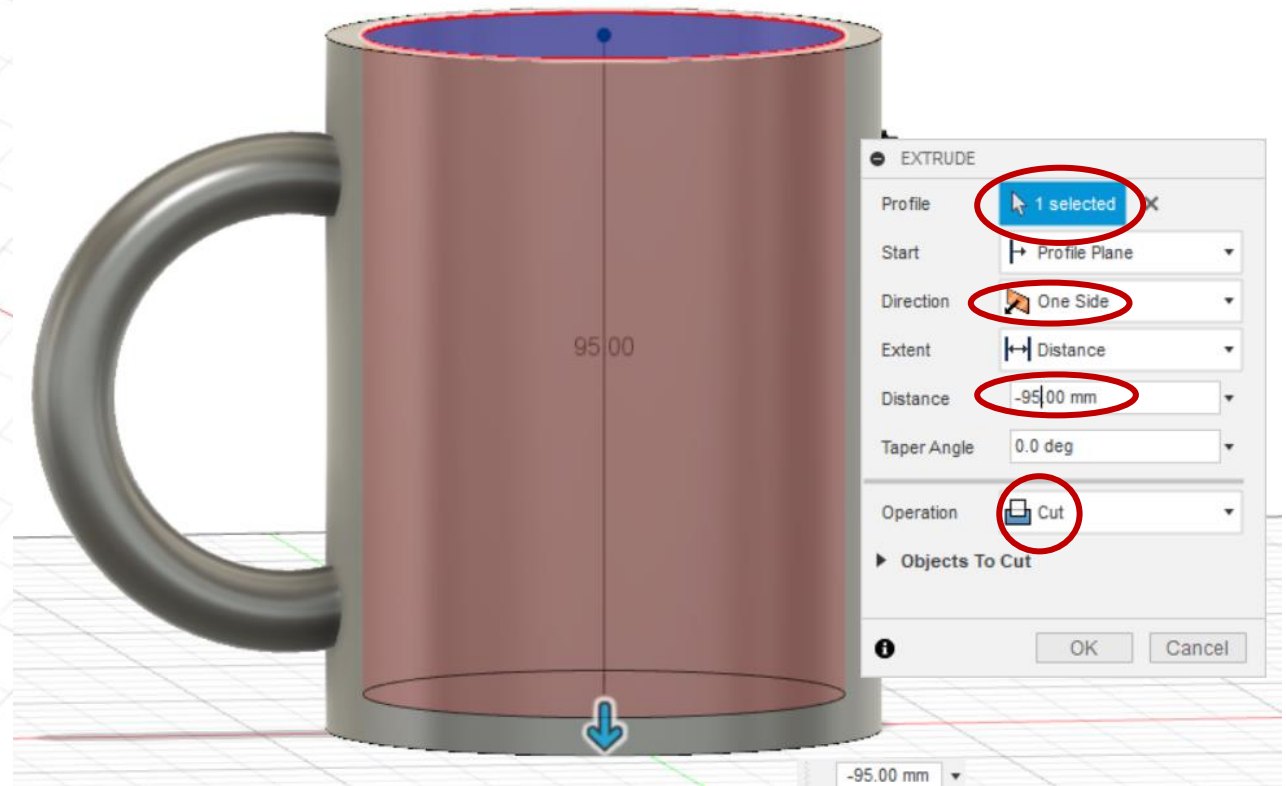


Step 6: Extrude Upper plane

1) [Create sketch] → Select a **Upper circle plane**



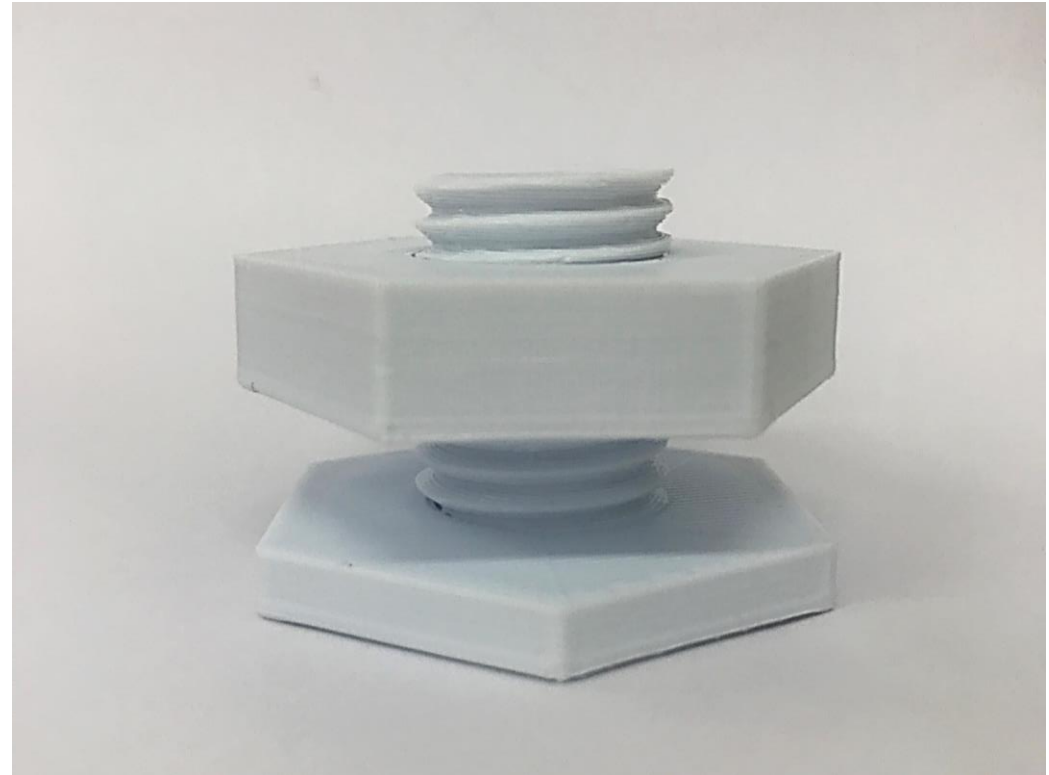
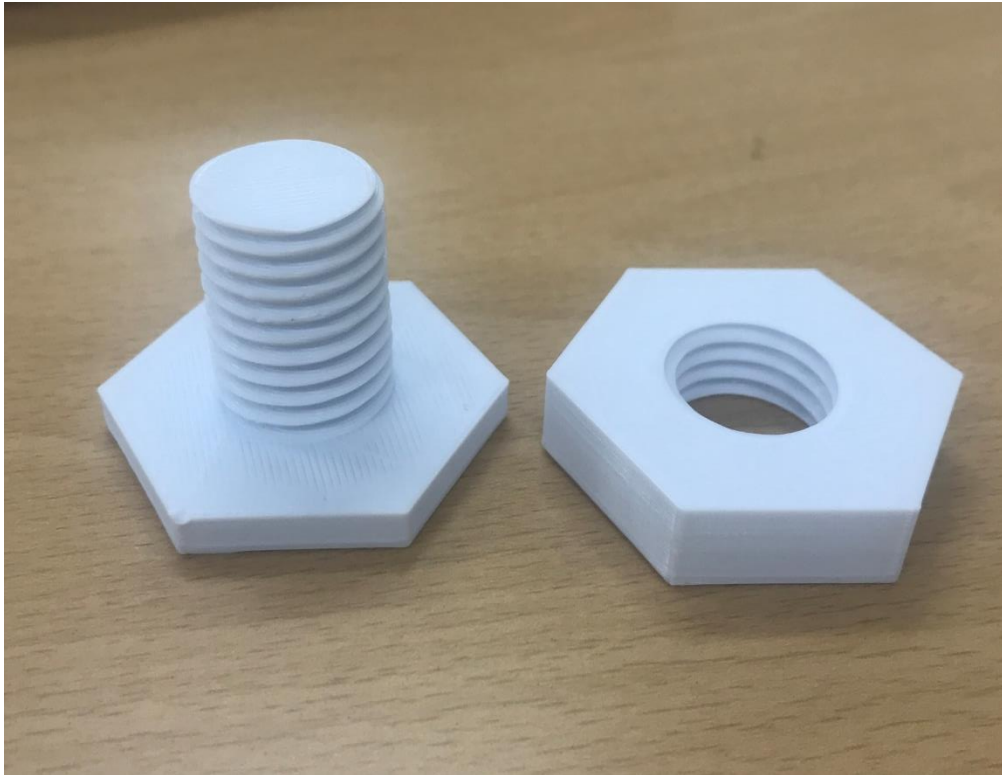
2) Draw the Circle → and **Extrude!**



Step 6: Well Done!

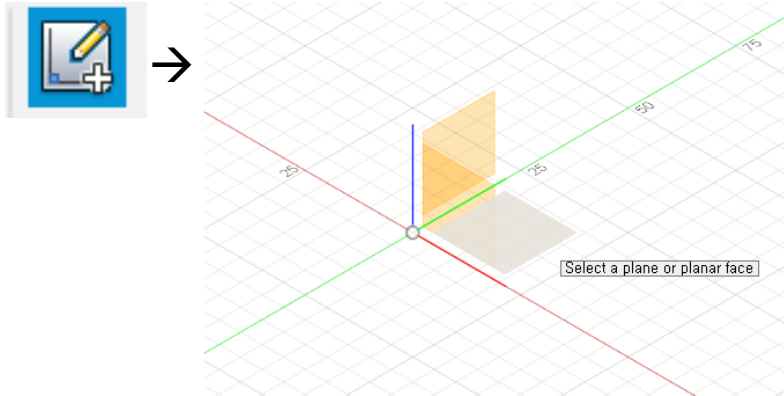


Exercise 4 : making <M20X2.5 bolt nut>

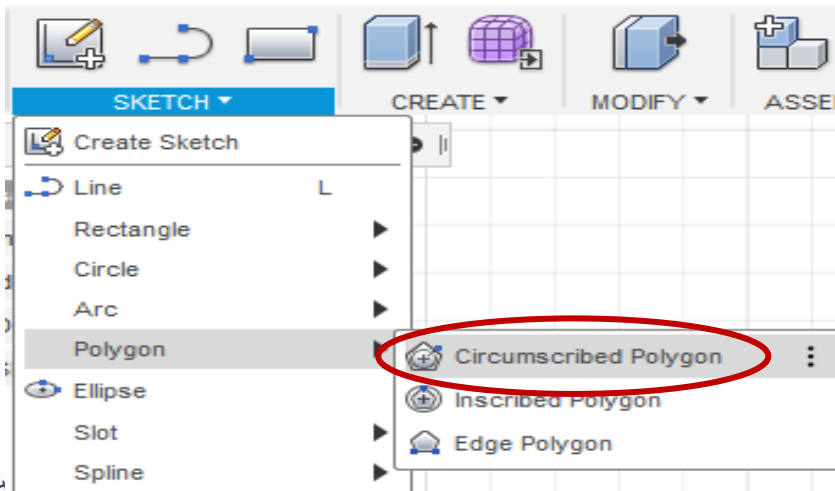


Step 1 : sketch polygon

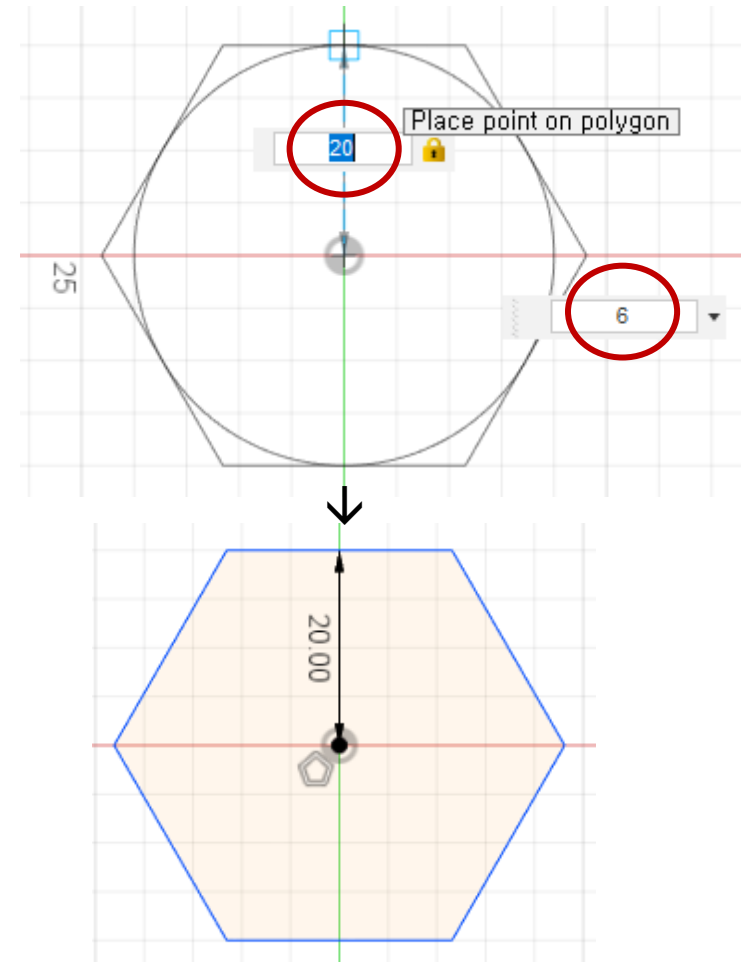
1) Create sketch -> select xy plane



2) Menu 'sketch' -> polygon -> circumscribed polygon

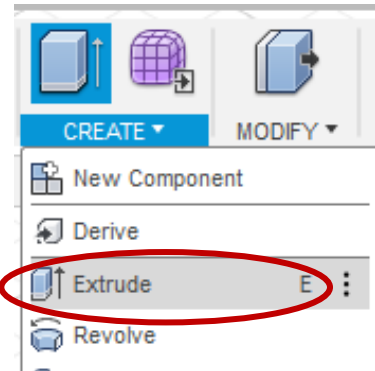


3) Radius **20mm** / # of points = **6**

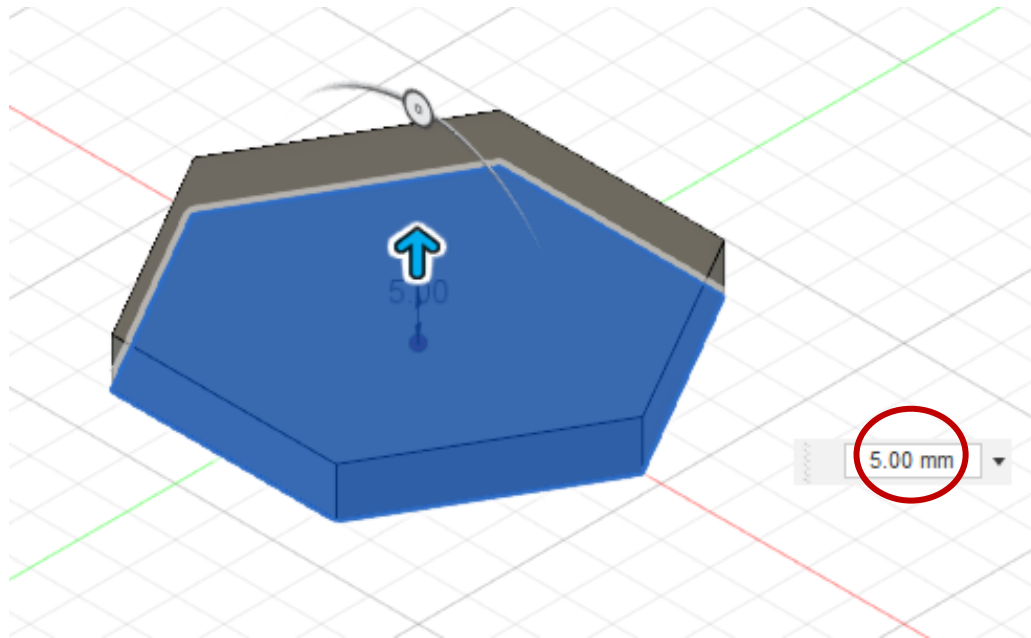
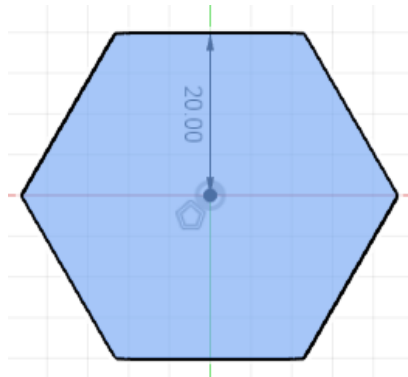


Step 2 : extrude

1) CREATE -> Extrude

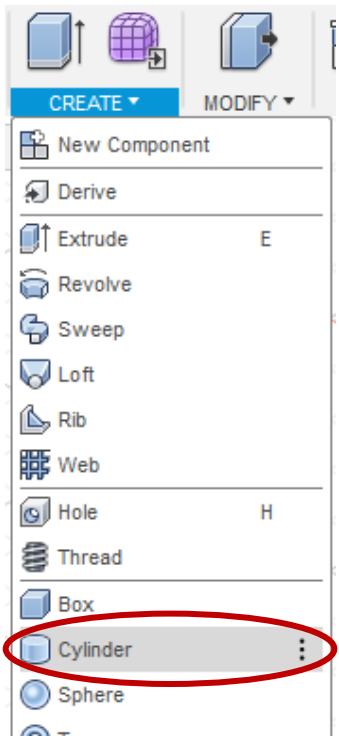


2) Select sketch -> Extrude **5mm**

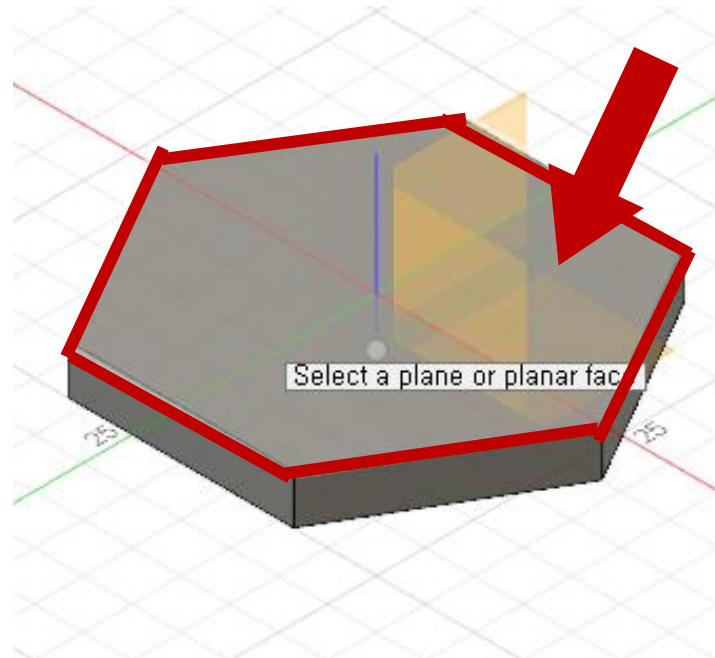


Step 3 : create cylinder

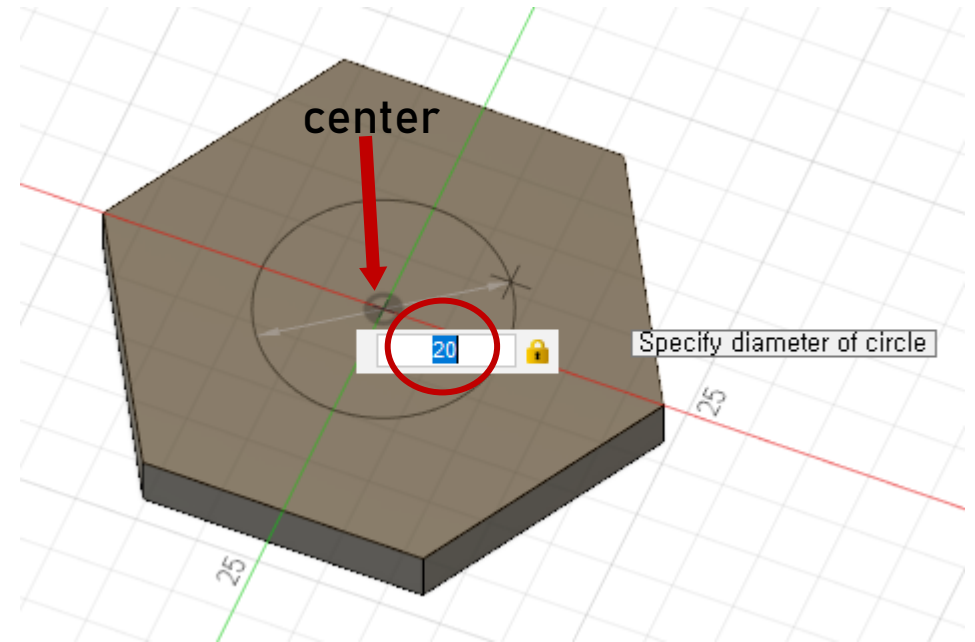
1) CREATE -> cylinder



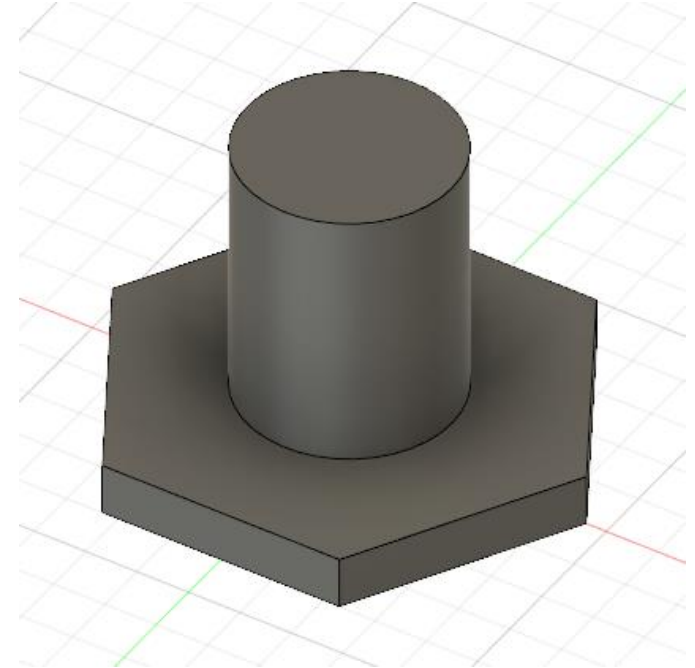
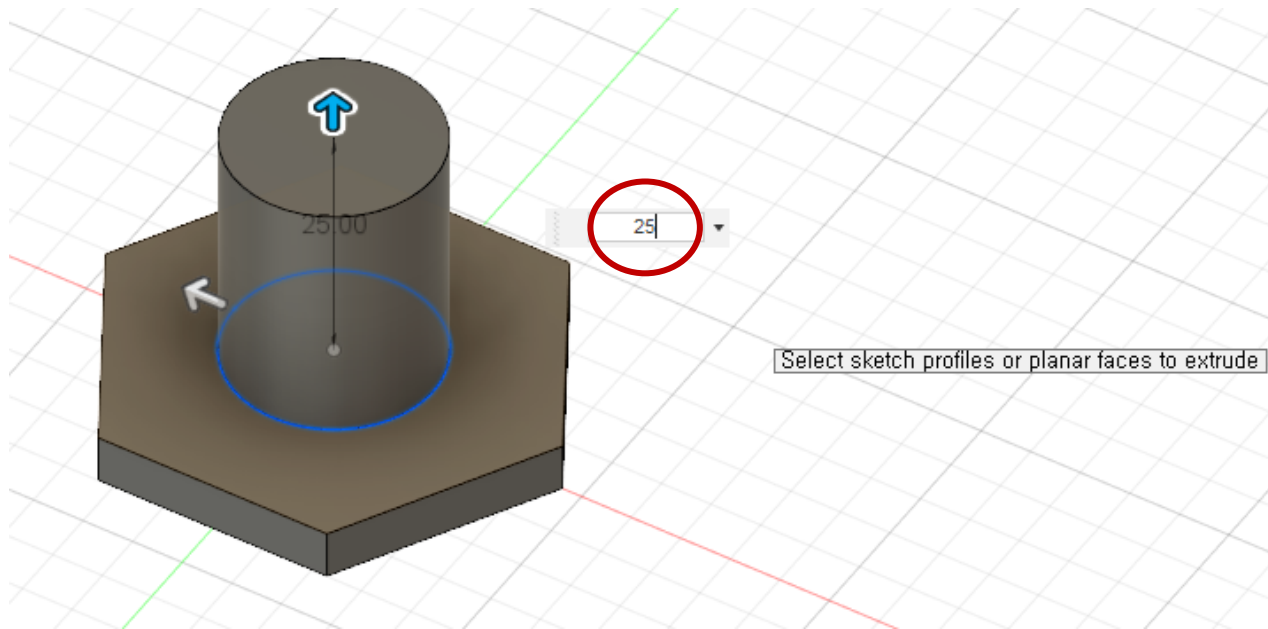
2) Select top plane !!



3) Sketch circle (**diameter : 20mm**)

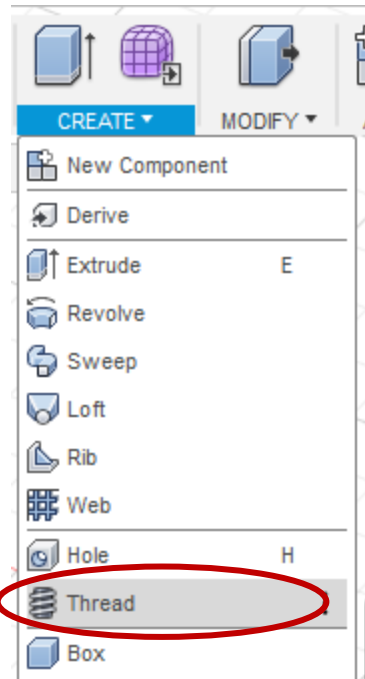


4) height : 25 mm

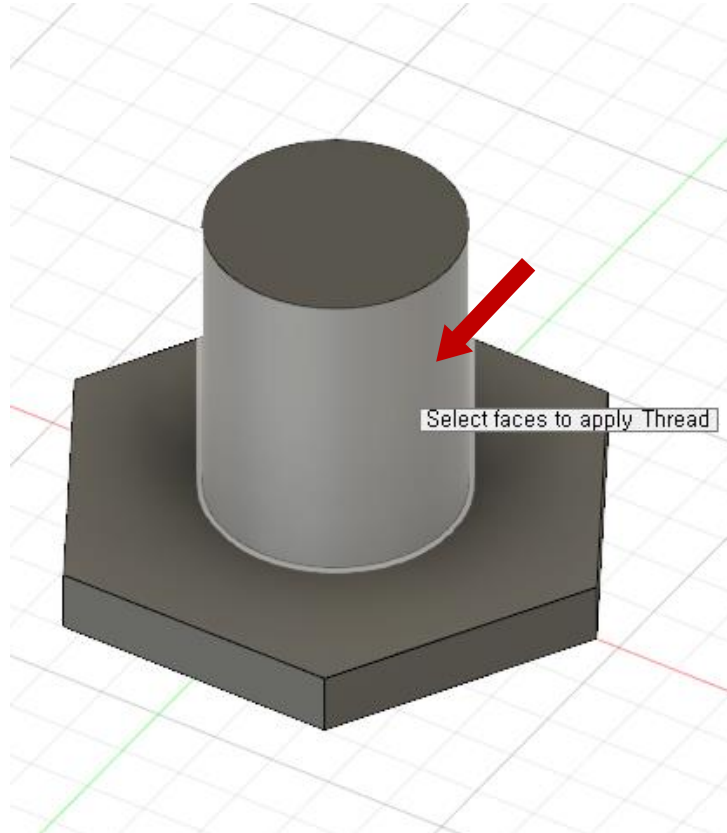


Step 4 : add thread

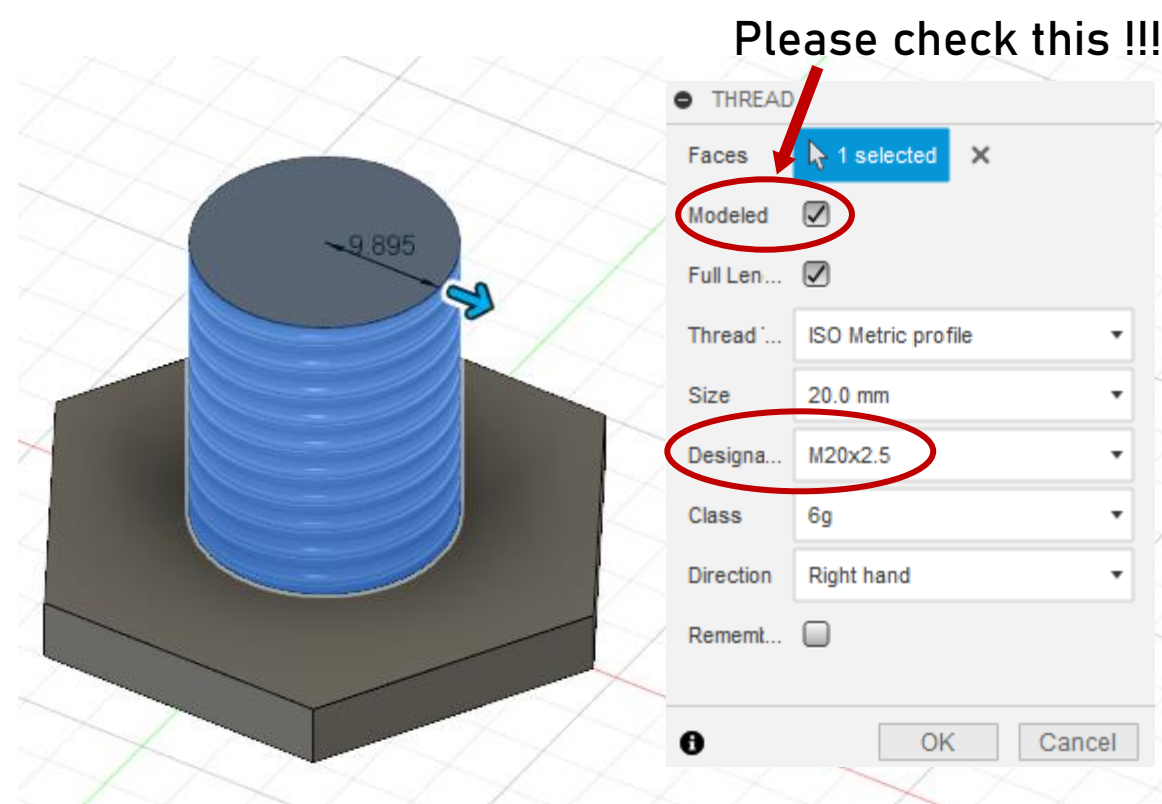
1) CREATE -> thread



2) Select side face

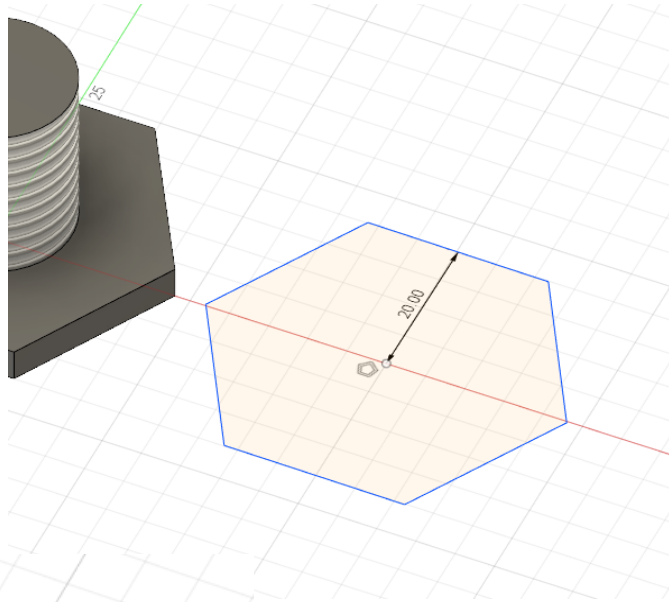


3) Check designation & enter!

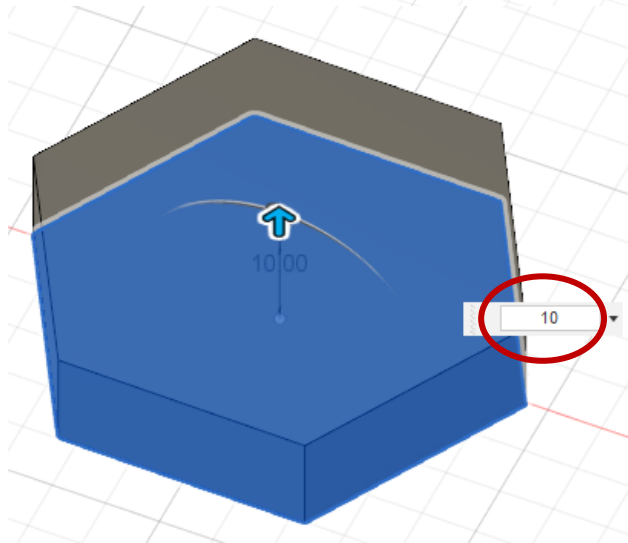


Step 5 : make the nut plate

1) Sketch polygon --> “step 1” 참고 !

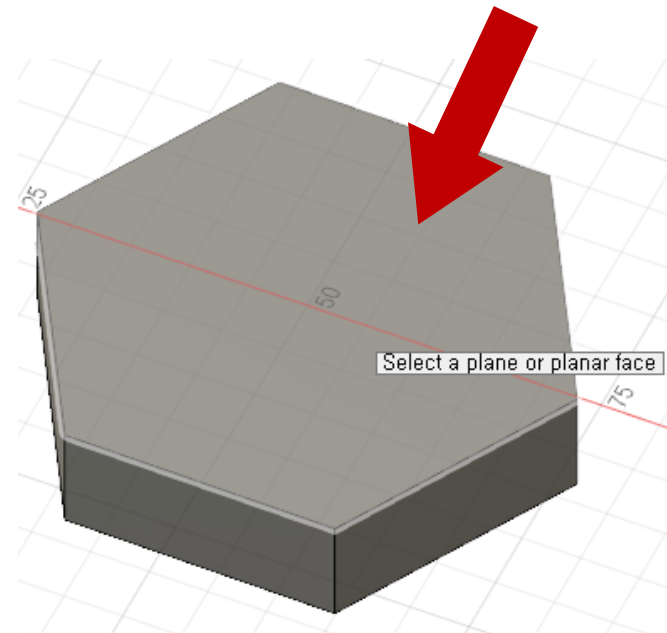
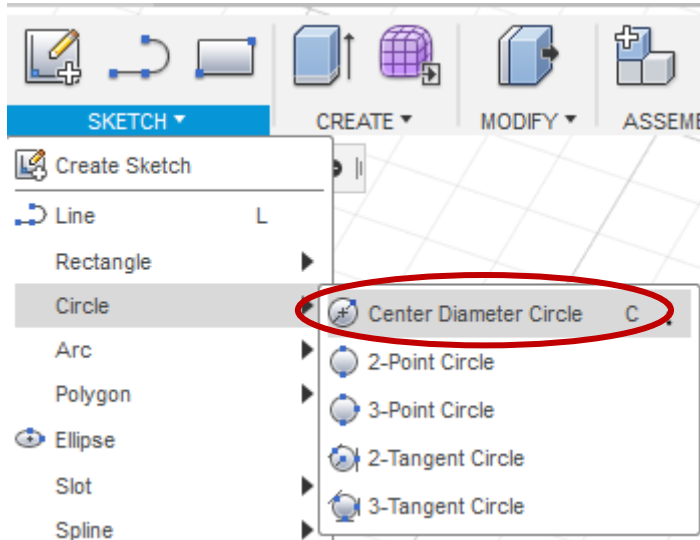


2) Extrude 10mm

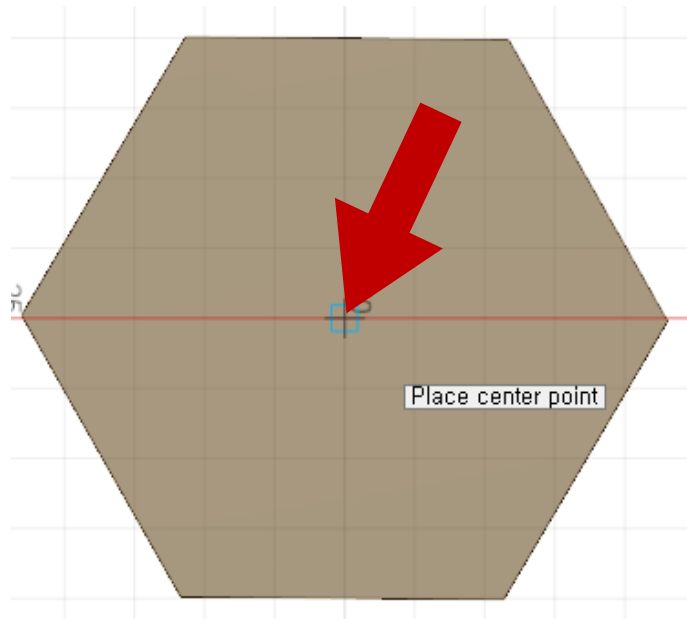


Step 6 : cut plate

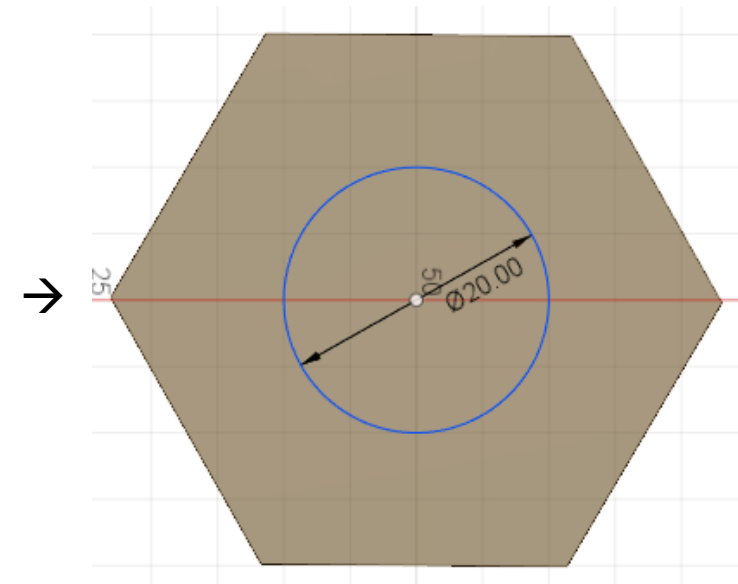
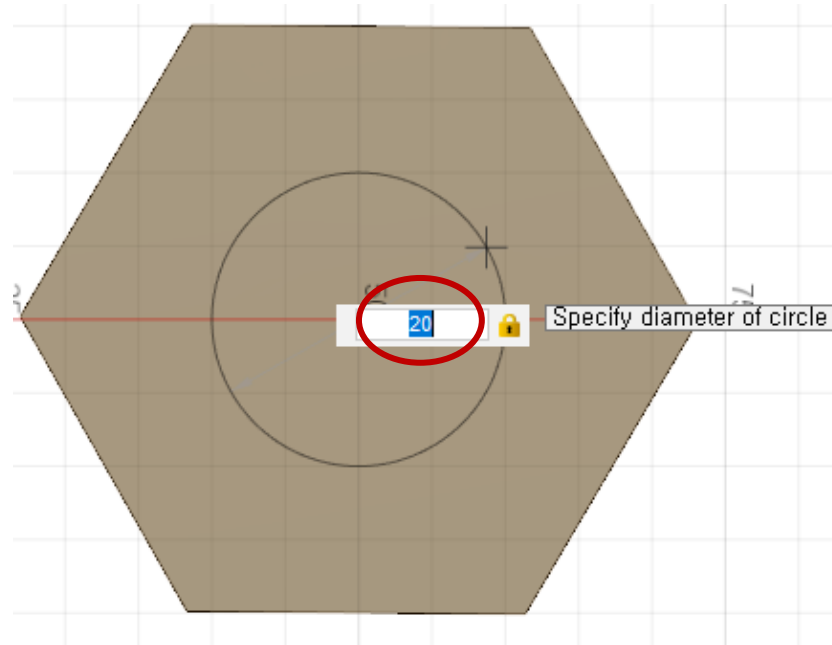
- 1) SKETCH -> Circle -> Center Diameter Circle
- 2) Select top plane



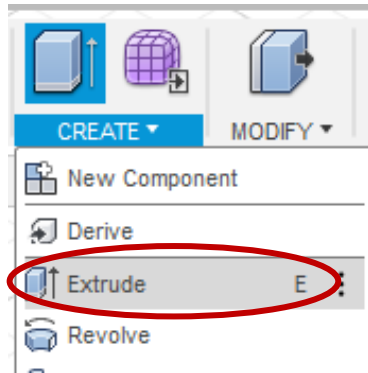
3) Place center point



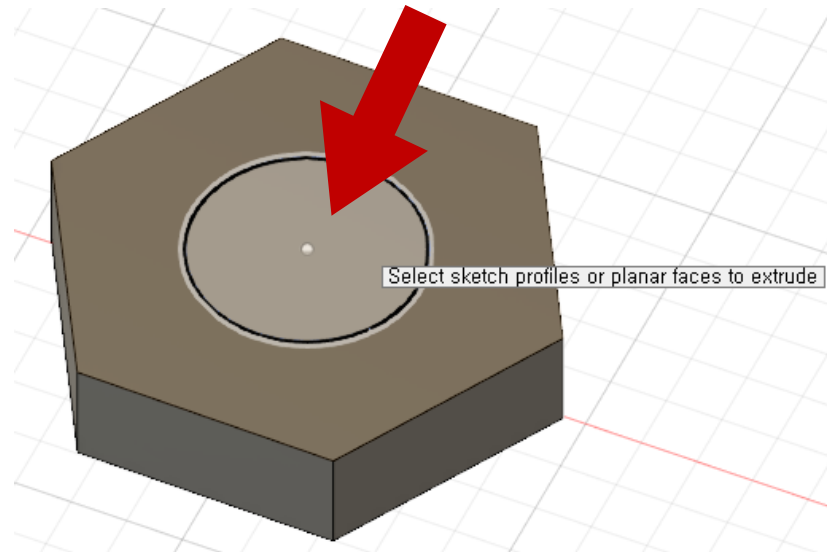
4) diameter = 20mm!



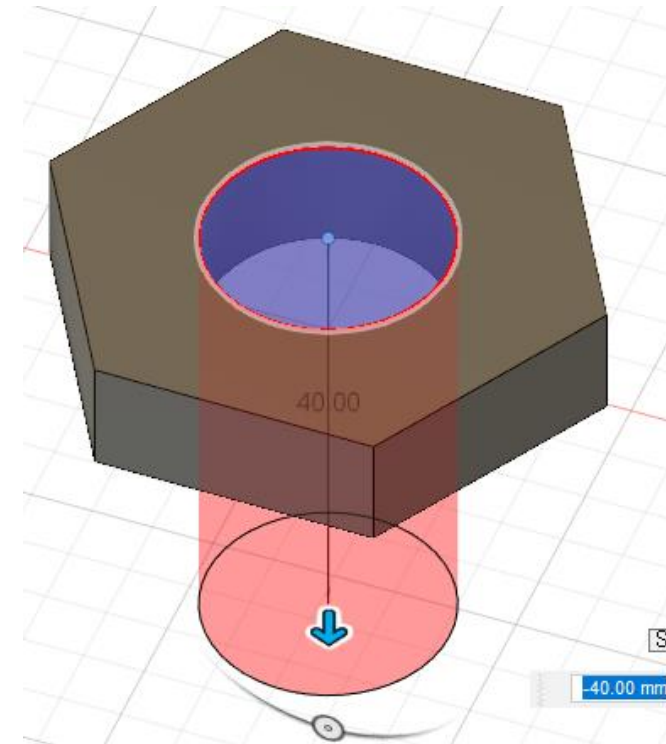
5) CREATE -> extrude



6) Select plane: click circle

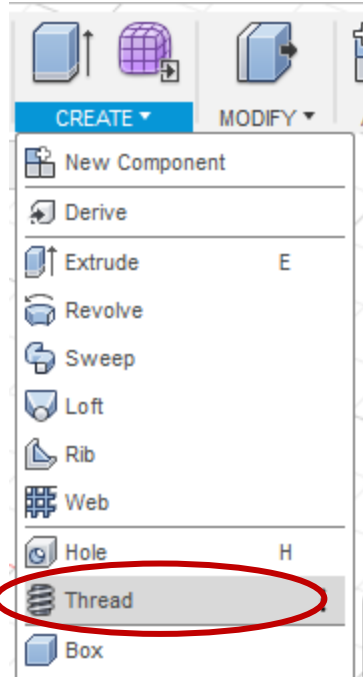


7) Drag blue arrow in the (-) direction

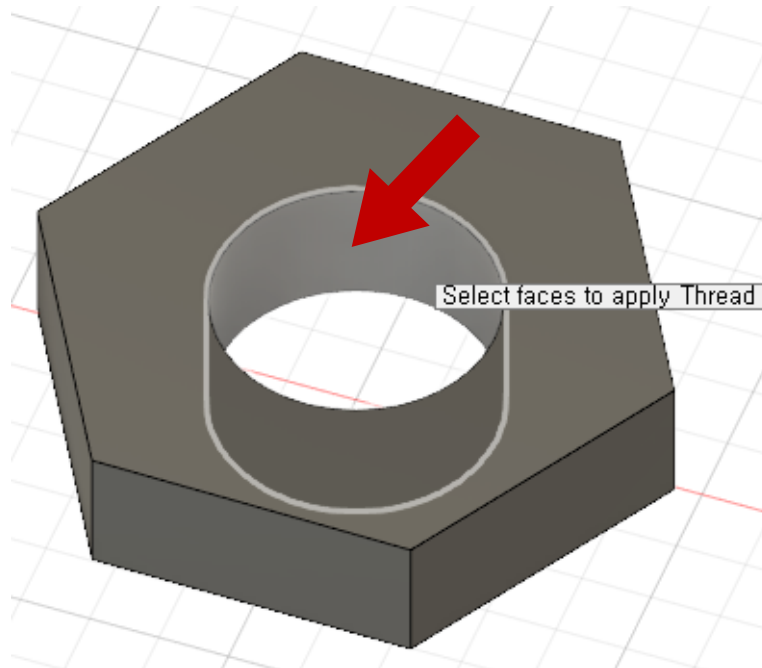


Step 7 : add thread

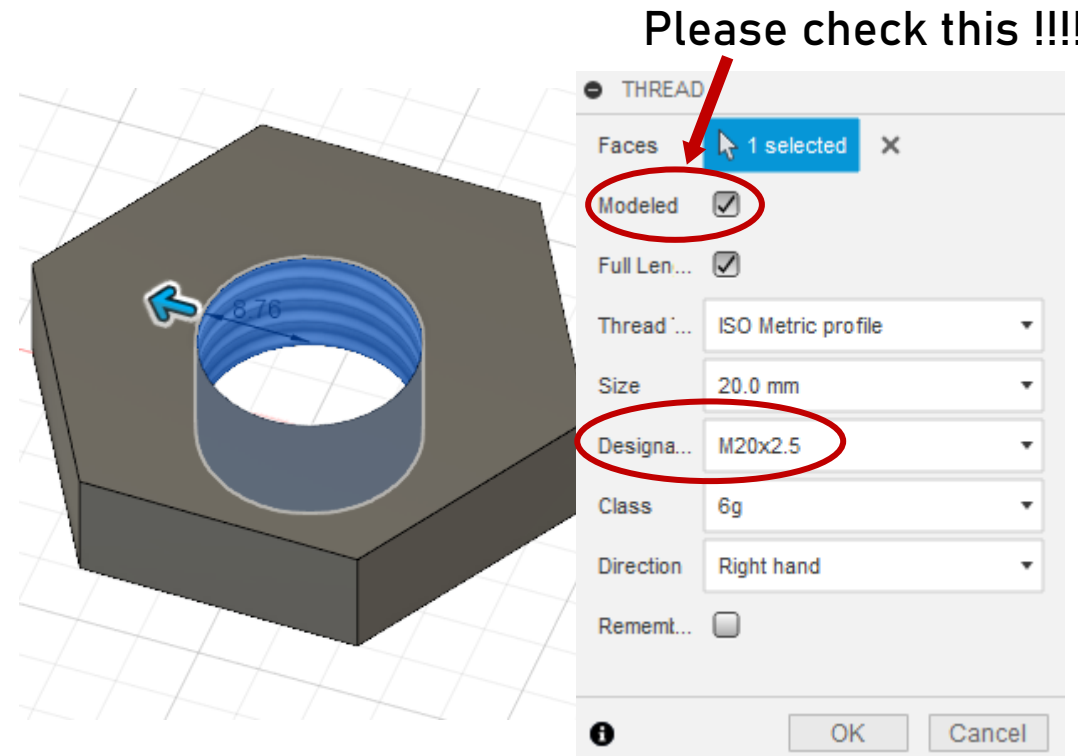
1) CREATE -> thread



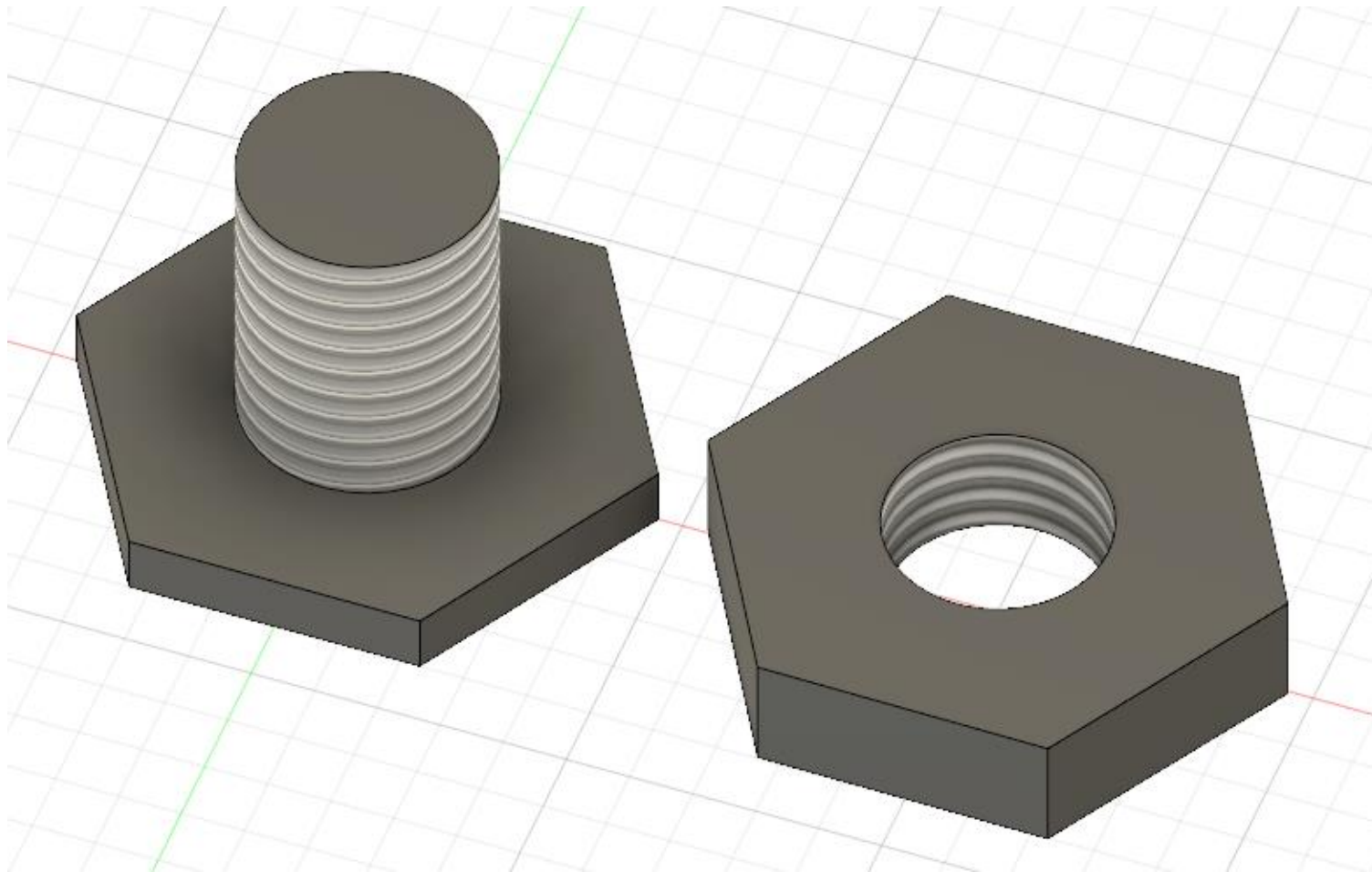
2) Select inner face



3) Check designation & enter!



Finish~ ^^!



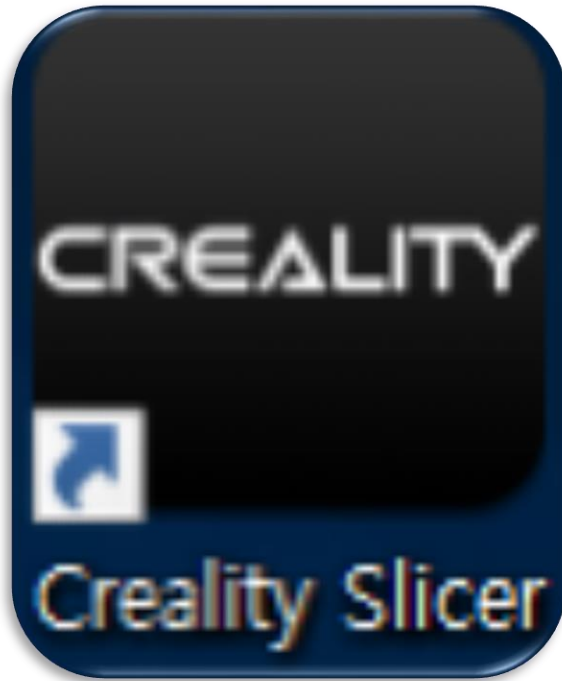
CREALITY

Slicer Program

Change Filename Extension



First, Double Click!



.stl

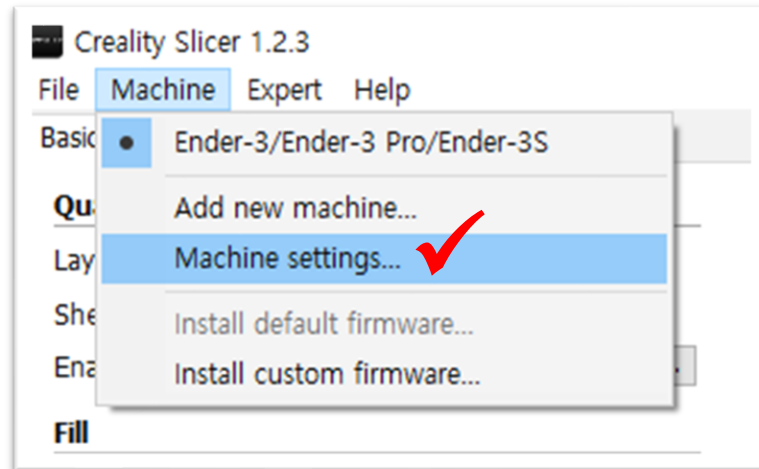


.gcode



Machine Setting (for Ender3)

- [Machine] → [Machine Settings]



The 'Machine settings' dialog box is shown for the 'Ender-3/Ende-3 Pro/Ende-3S' machine. It contains two columns of settings: 'Machine settings' and 'Printer head size'. The 'Machine settings' column includes fields for E-Steps per 1mm filament (0), Maximum width (mm) (220), Maximum depth (mm) (220), Maximum height (mm) (250), Extruder count (1), Heated bed (checked), Machine center 0,0 (unchecked), Build area shape (Square), and GCode Flavor (RepRap (Marlin/Sprinter)). The 'Printer head size' column includes fields for Head size towards X min (mm) (40), Head size towards Y min (mm) (10), Head size towards X max (mm) (60), Head size towards Y max (mm) (30), and Printer gantry height (mm) (48). There are also 'Communication settings' for Serial port (AUTO) and Baudrate (AUTO). At the bottom, there are buttons for 'Ok', 'Add new machine', 'Remove machine', and 'Change machine name'.

Machine settings	
E-Steps per 1mm filament	0
Maximum width (mm)	220
Maximum depth (mm)	220
Maximum height (mm)	250
Extruder count	1
Heated bed	<input checked="" type="checkbox"/>
Machine center 0,0	<input type="checkbox"/>
Build area shape	Square
GCode Flavor	RepRap (Marlin/Sprinter)

Printer head size	
Head size towards X min (mm)	40
Head size towards Y min (mm)	10
Head size towards X max (mm)	60
Head size towards Y max (mm)	30
Printer gantry height (mm)	48

Communication settings	
Serial port	AUTO
Baudrate	AUTO

Buttons: Ok, Add new machine, Remove machine, Change machine name

Ender-3/Ender-3 Pro/Ender-3S

Machine settings

E-Steps per 1mm filament	<input type="text" value="0"/>
Maximum width (mm)	<input type="text" value="220"/>
Maximum depth (mm)	<input type="text" value="220"/>
Maximum height (mm)	<input type="text" value="250"/>
Extruder count	<input type="text" value="1"/>
Heated bed	<input checked="" type="checkbox"/>
Machine center 0,0	<input type="checkbox"/>
Build area shape	<input type="text" value="Square"/>
GCode Flavor	<input type="text" value="RepRap (Marlin/Sprinter)"/>

Printer head size

Head size towards X min (mm)	<input type="text" value="40"/>
Head size towards Y min (mm)	<input type="text" value="10"/>
Head size towards X max (mm)	<input type="text" value="60"/>
Head size towards Y max (mm)	<input type="text" value="30"/>
Printer gantry height (mm)	<input type="text" value="48"/>

Communication settings

Serial port	<input type="text" value="AUTO"/>
Baudrate	<input type="text" value="AUTO"/>

How to Use ?

(Left) Object
Move

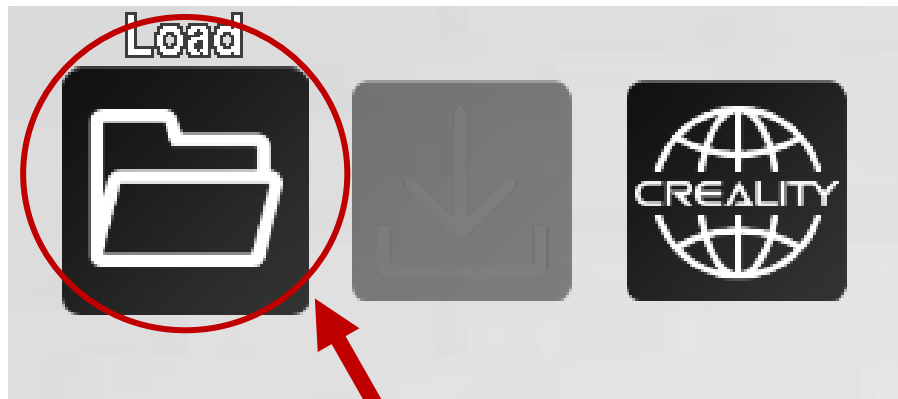
(Wheel) Scale

(Right) Zoom IN/OUT

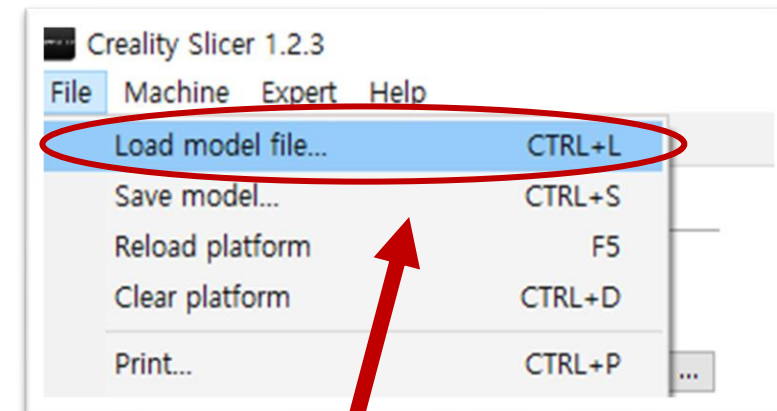


✓ Similar with fushion 360

- First, open .stl file.



Click this button or

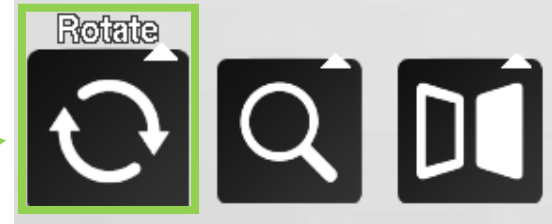


File > Load model file ...

How can we modify objects using Creality ? – ROTATE

1. Click the Object !

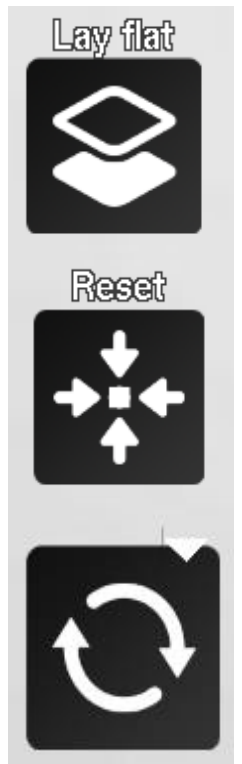
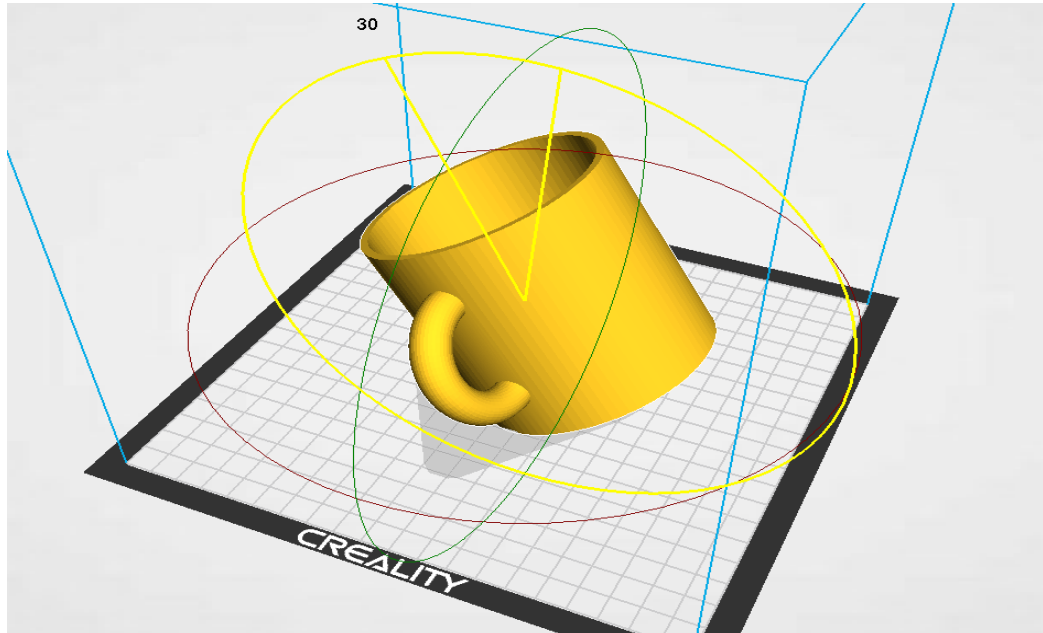
2. Look at the 3 buttons below



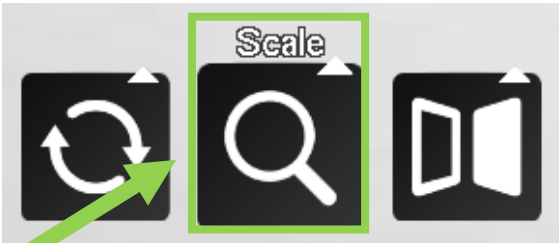
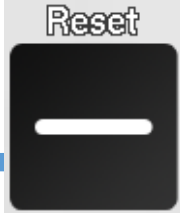
Press this button.

3. Choose one of these circle and **ROTATE**

You can rotate either X, Y or Z axis ! (But only rotate by 15 degree's)



Modifying – SCALE



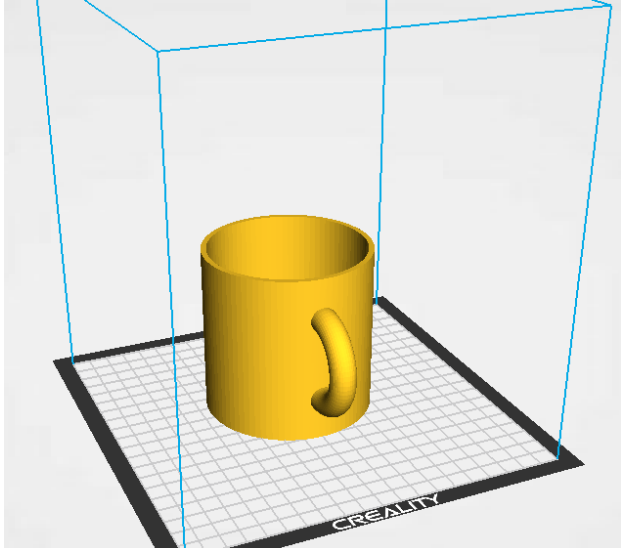
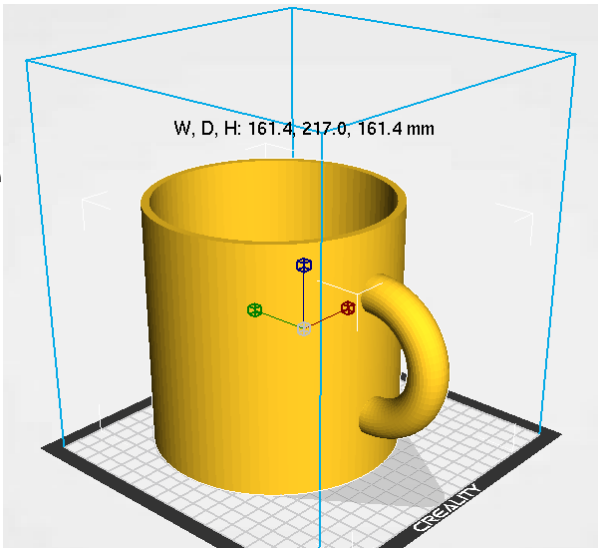
Press this button.



Size UP



Original Size



Scale X	1.0
Scale Y	1.0
Scale Z	1.0
Size X (mm)	100.0
Size Y (mm)	134.47
Size Z (mm)	100.0
Uniform scale	

or



Scale X,Y,Z



Regulate the Multiple

Size X,Y,Z



Regulate the Actual Size

Uniform scale



Fix the Size (0/X)

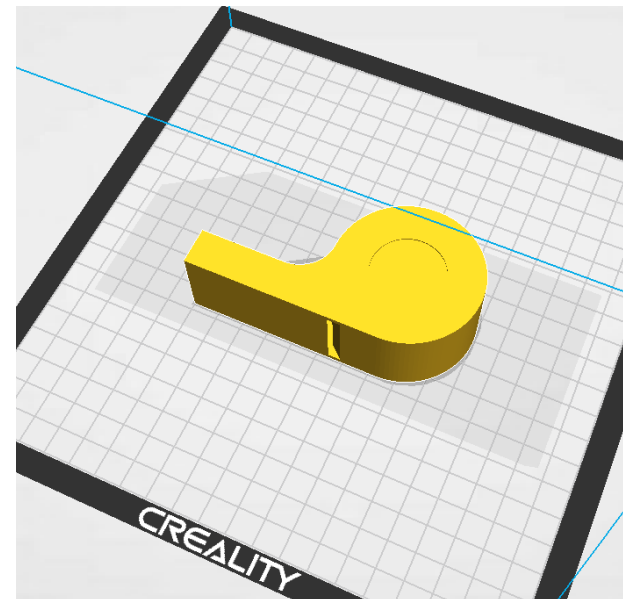
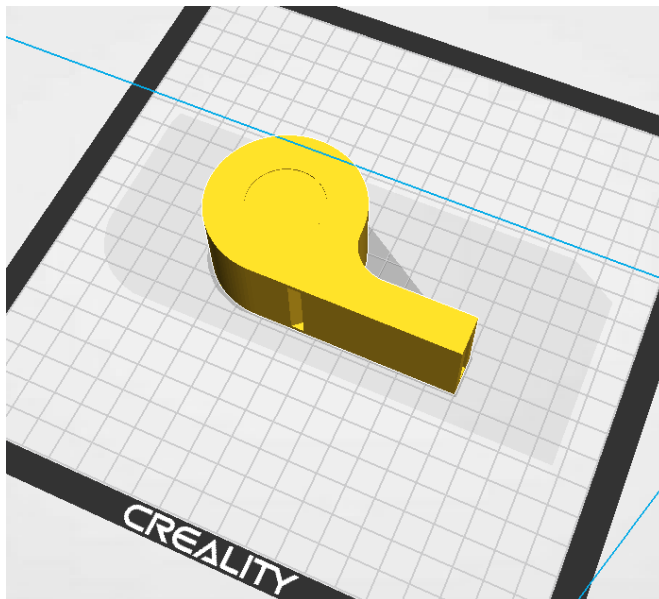
Modifying – MIRROR



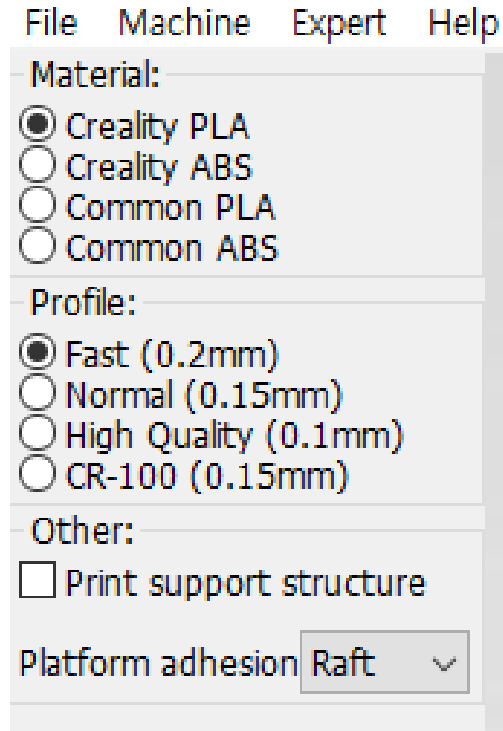
MIRROR the object on the Axis X, Y, Z

Press this button.

- For example, mirror X



Settings for Print



▪ Material

→ Creality PLA

▪ Profile

→ Fast(0.2mm)

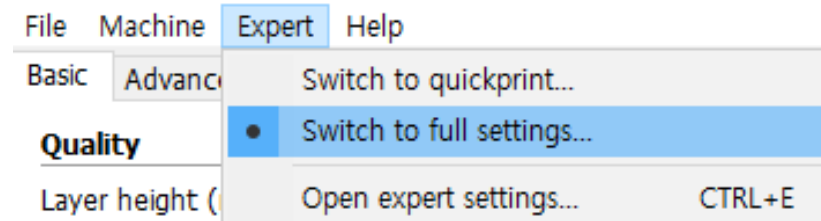
▪ Print support structure

→ Check ✓ (If you need Support)

▪ Platform adhesion

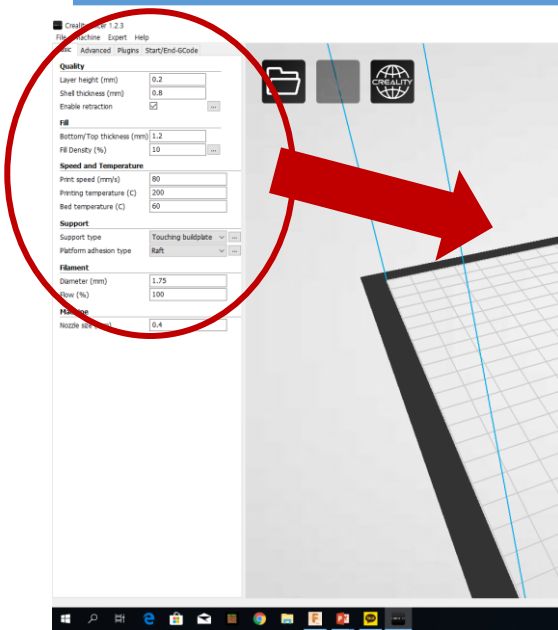
→ RAFT

*** Detailed Setting



[Expert] → Click switch to full settings
→ Click Y

Can you see BASIC MENU on the Left?



Basic Advanced Plugins Start/End-GCode

Quality

Layer height (mm) 0.2

Shell thickness (mm) 0.8

Enable retraction ☒

Fill

Bottom/Top thickness (mm) 1.2

Fill Density (%) 10

Speed and Temperature

Print speed (mm/s) 80

Printing temperature (C) 200

Bed temperature (C) 60

Support

Support type Touching buildplate

Platform adhesion type Raft

Filament

Diameter (mm) 1.75

Flow (%) 100

Machine

Nozzle size (mm) 0.4

Fill Density
(How much you're going to fill inside)
usually 10%

Setting for Support

Support type

Touching buildplate

None

Touching buildplate

Everywhere

Platform adhesion type

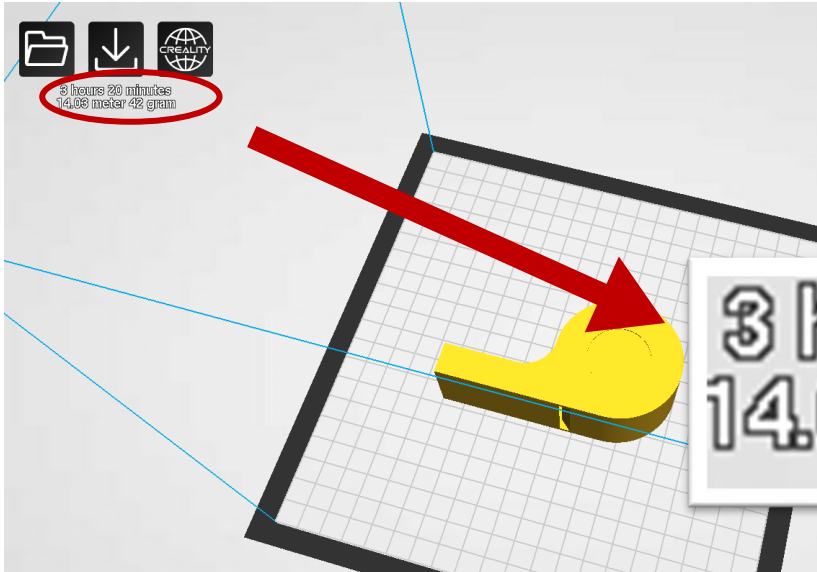
Raft

None

Brim

Raft

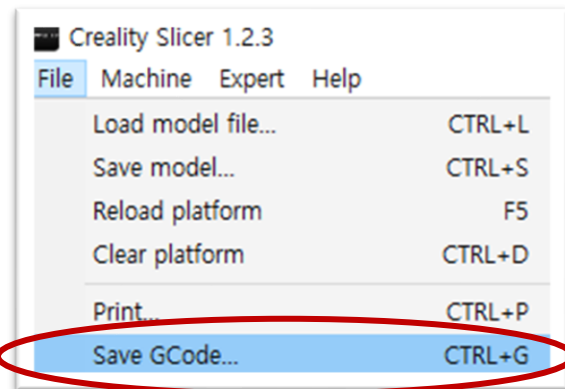
Final Step ! We're Almost there !



Can you see the information below  (or ) ??

3 hours 20 minutes
14.03 meter 42 gram

- Lasting **Time** for Printing
- Required **Weight** and **Length** of Filament



File > Save Gcode ...

or



→ **Save to GCODE**

Now, Let's Printout !!!

