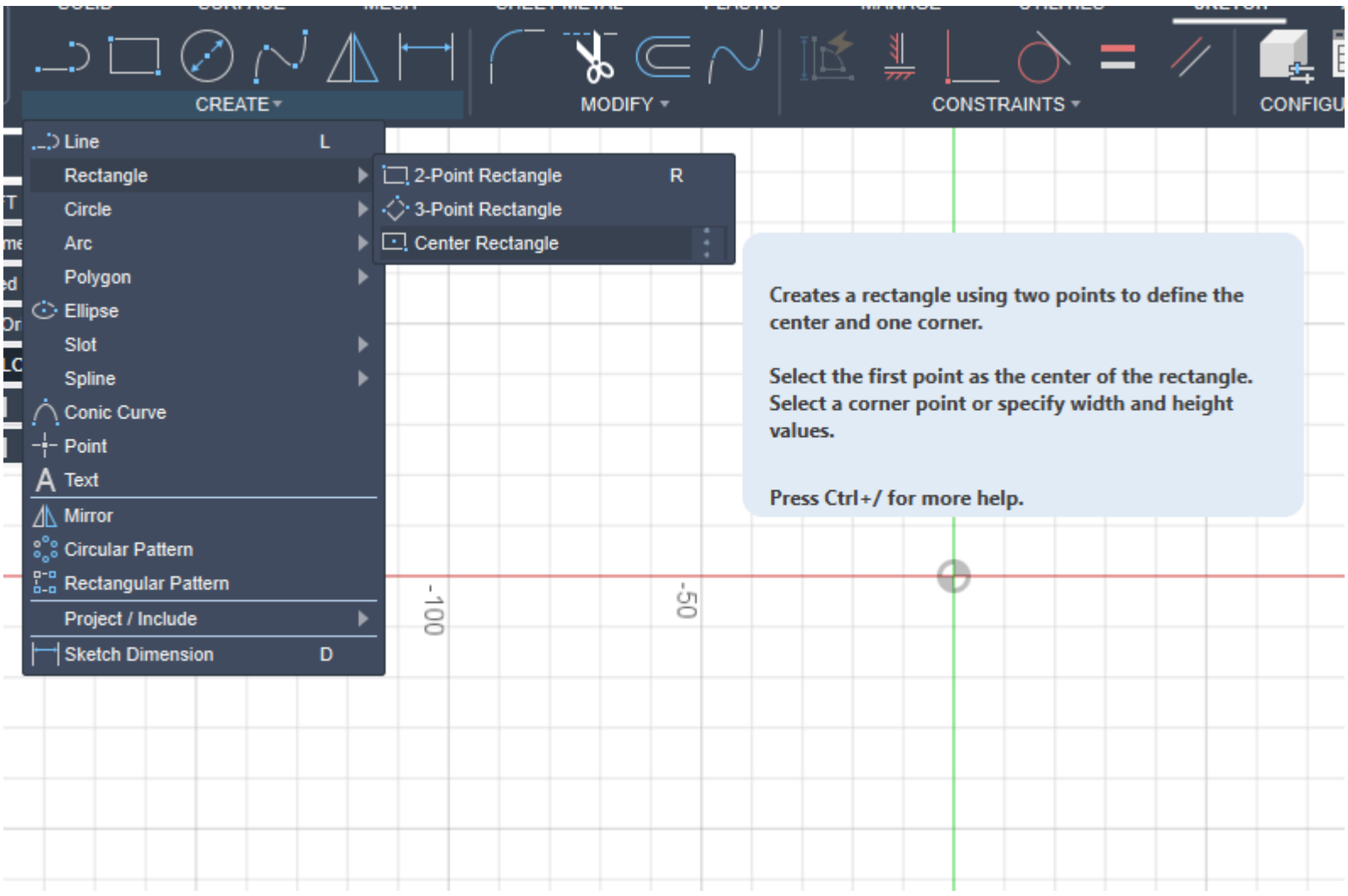
Glass Bottle Using Loft Command

1. Start With Center Rectangle

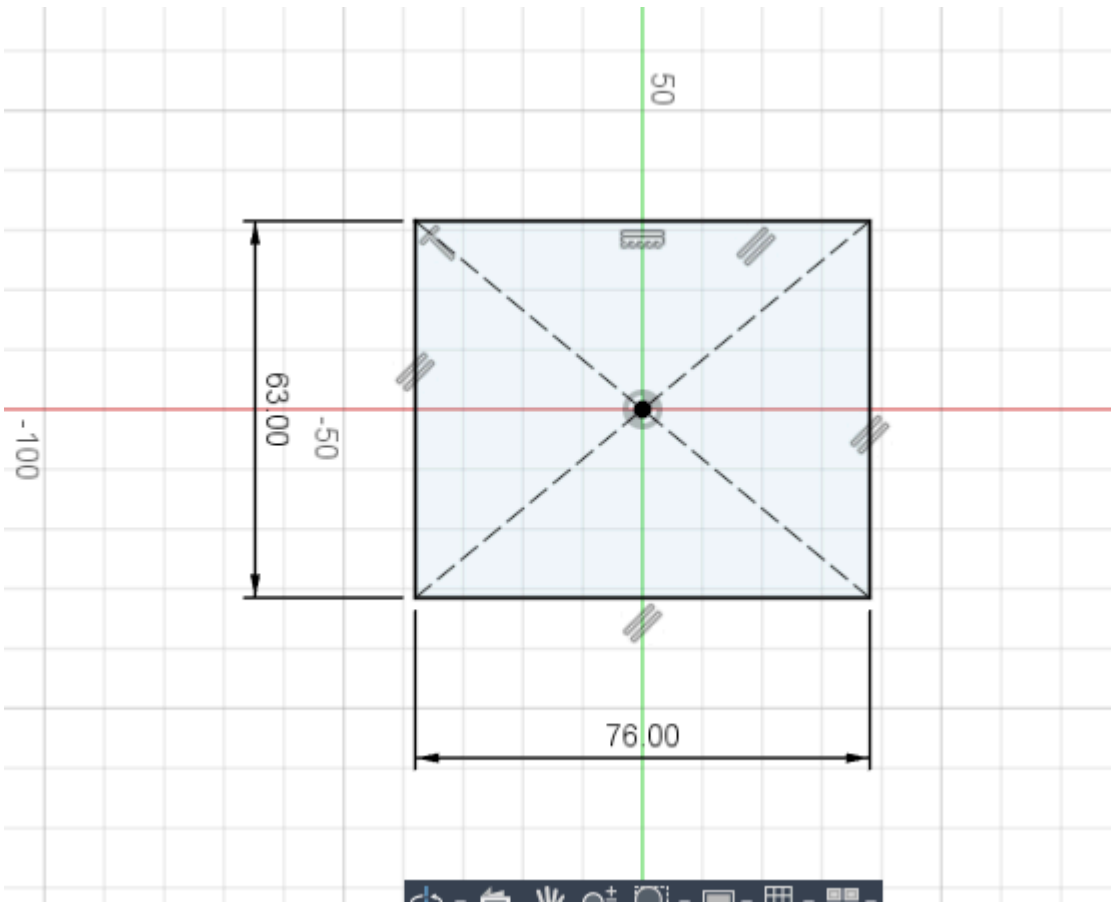


Create a **New Component** named **Glass Bottle**.

Start a sketch on the **XY plane**.
Use **Center Rectangle** and draw from the origin.

---

2. Add Dimensions

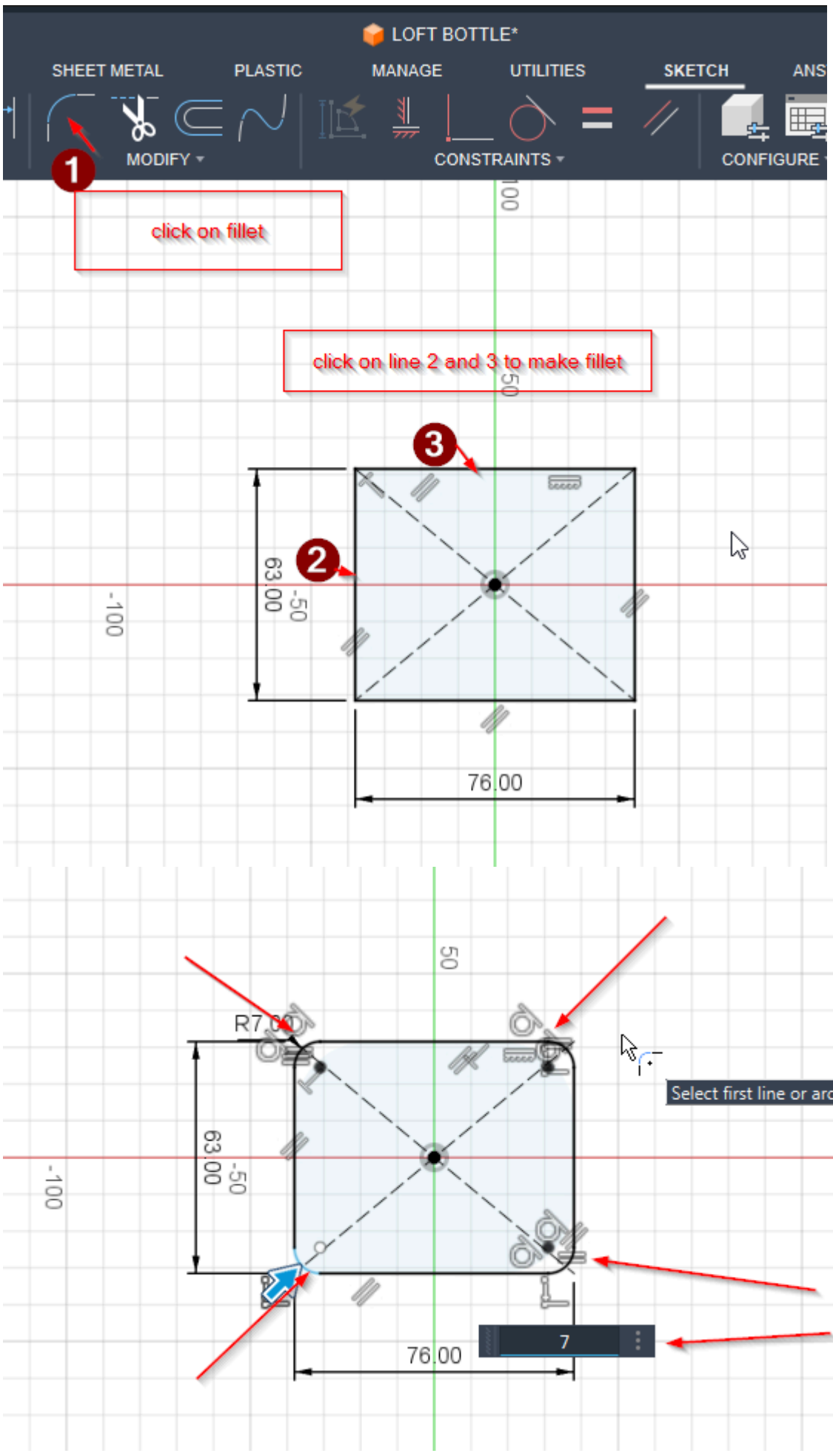


Set dimensions:

- Length: **76 mm**
- Width: **63 mm**

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3. Apply Sketch Fillets

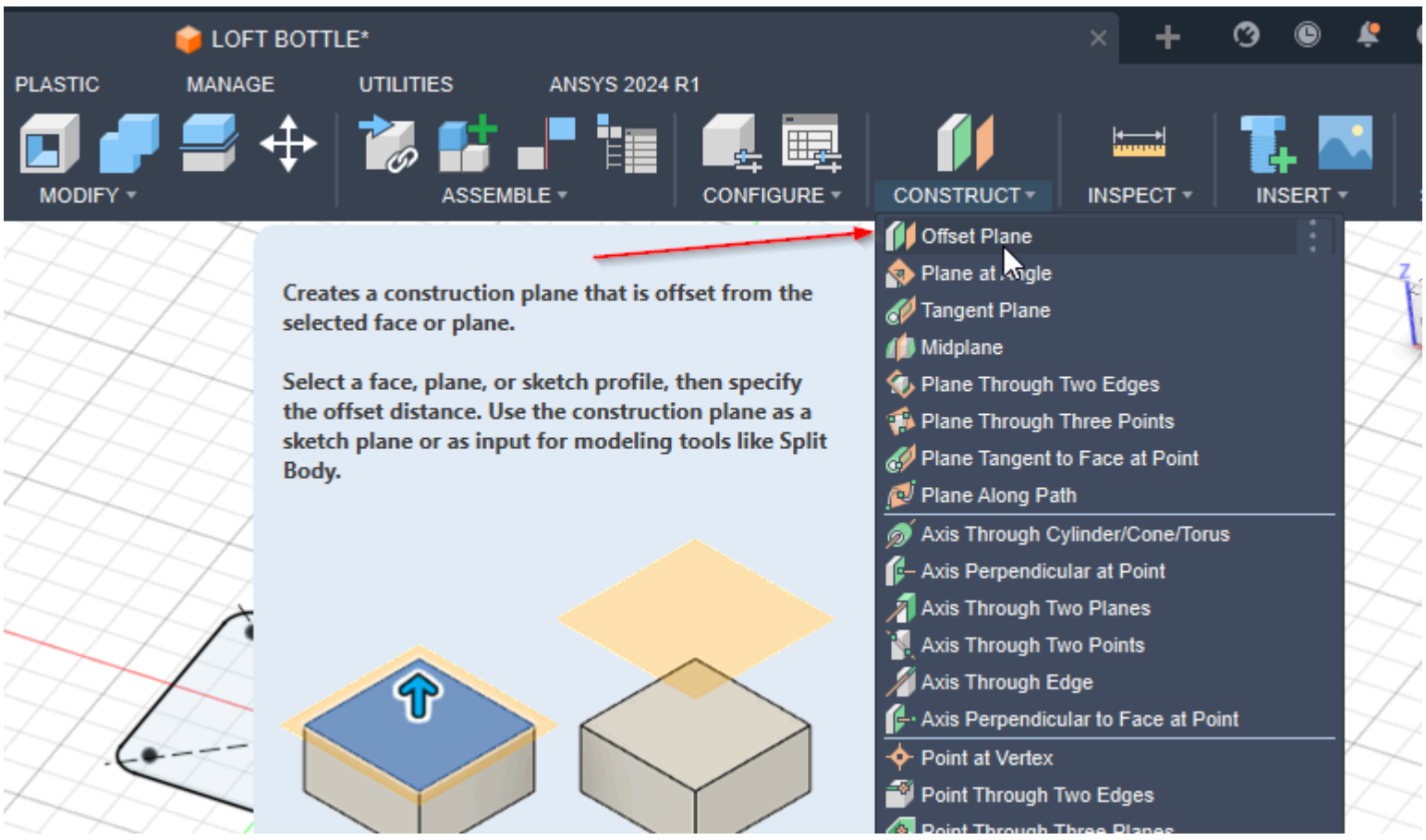


Apply **Sketch Fillet** (not model fillet) on all corners and set **R = 7 mm**.

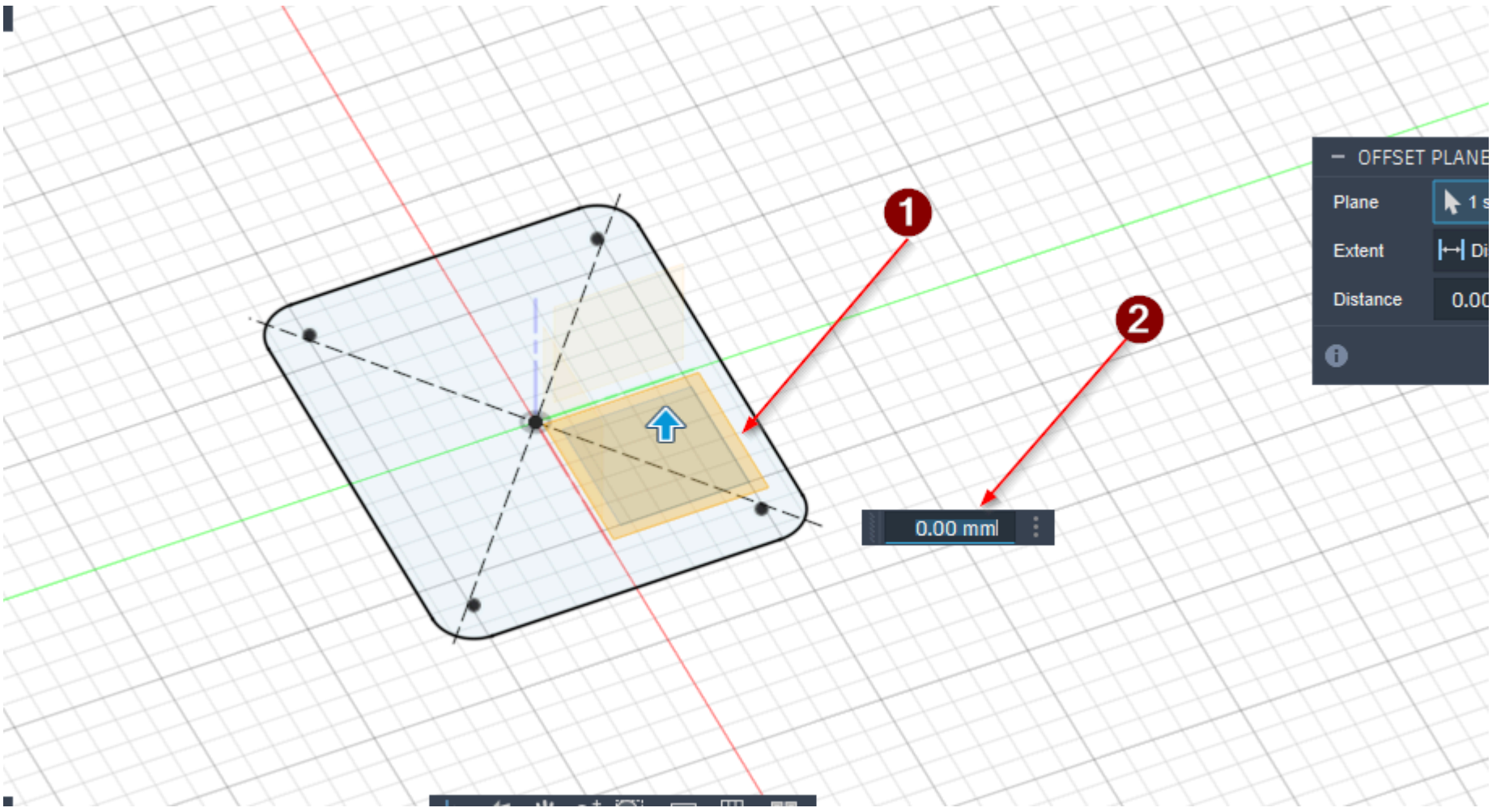
Click **Finish Sketch**.

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4. Create First Offset Plane (114 mm)



Go to **Construct → Offset Plane**.

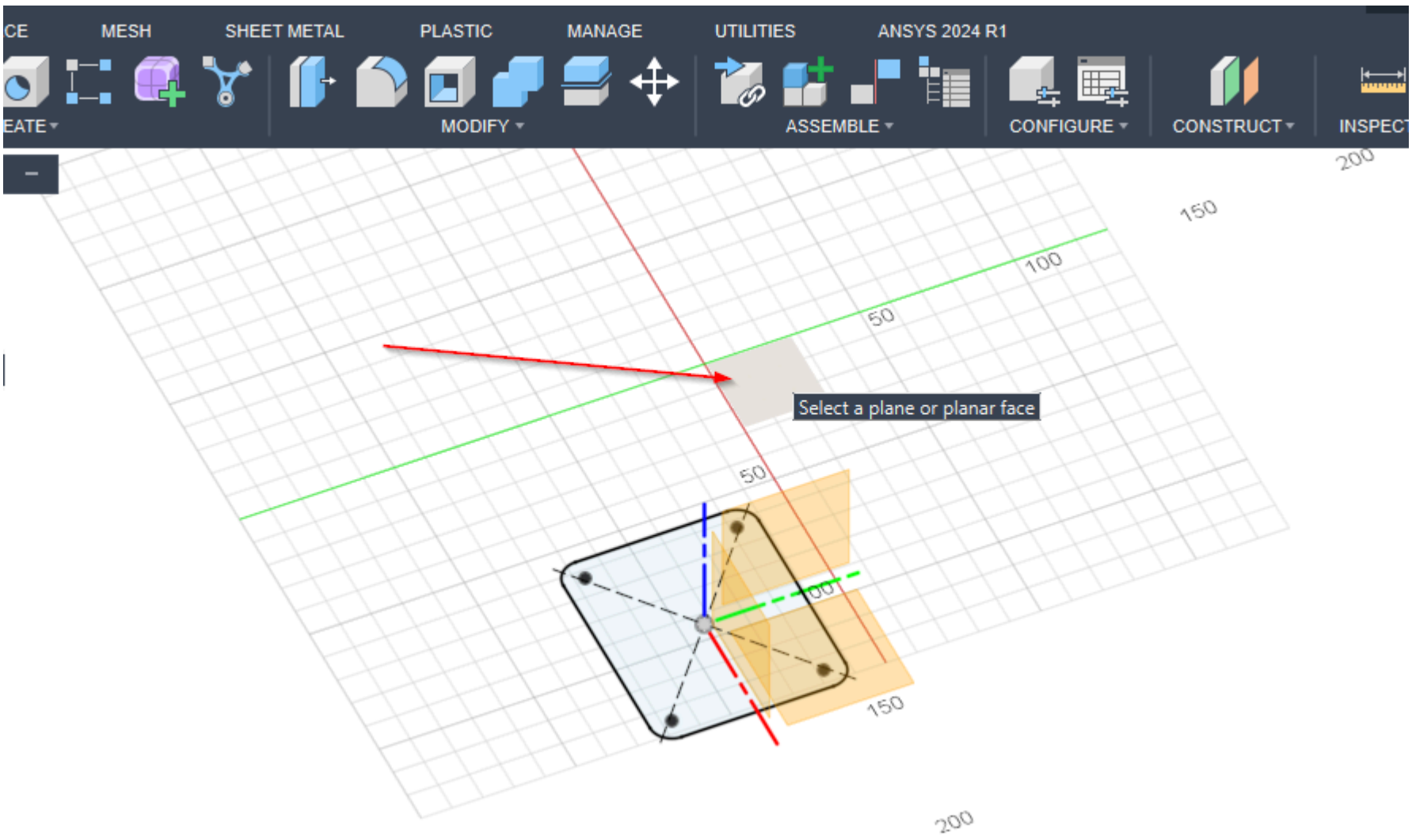


1 — Select the first sketch plane.
2 — Offset **114 mm** upward.

Click **OK**.

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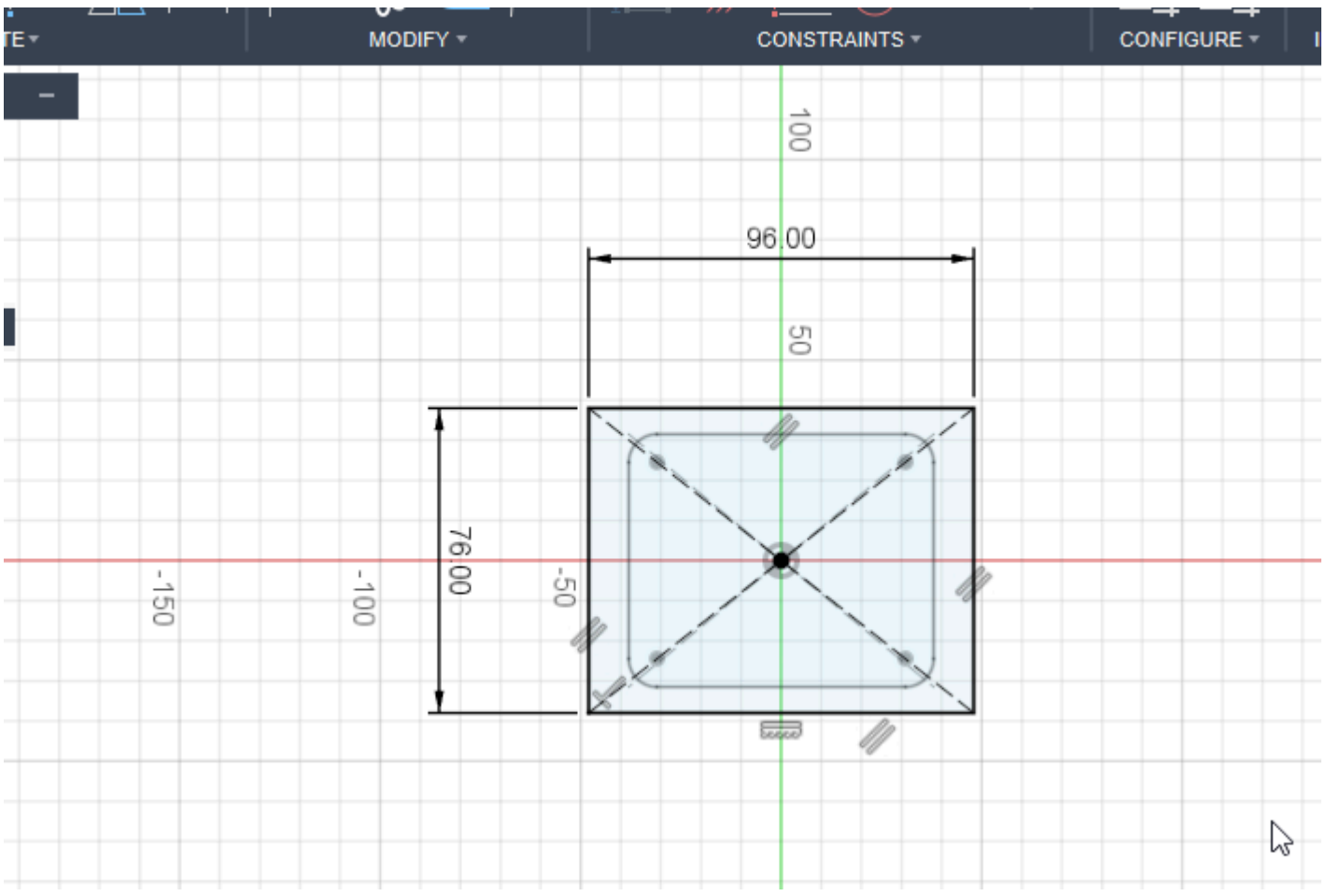
5. Create Sketch on Offset Plane



Select **Create Sketch** on the newly created plane.

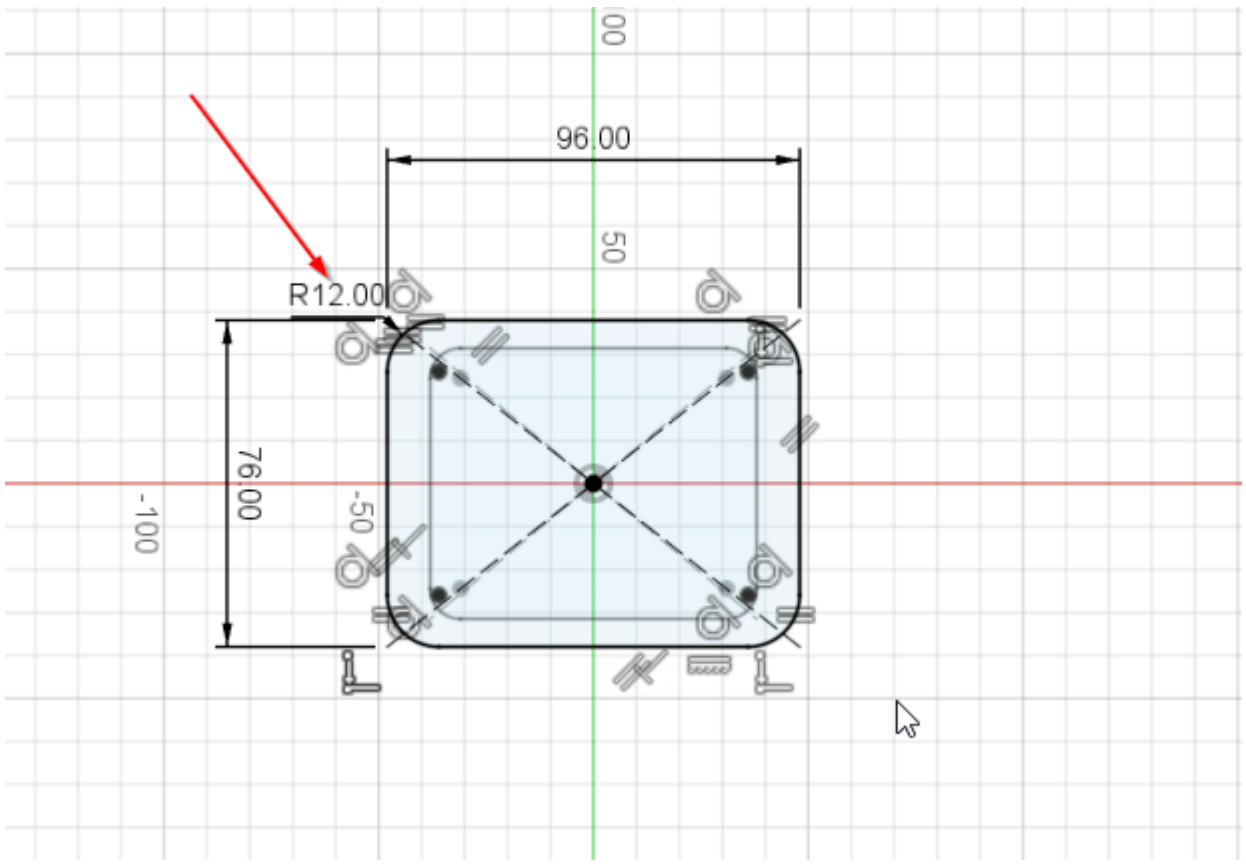
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6. Draw the Second Rectangle



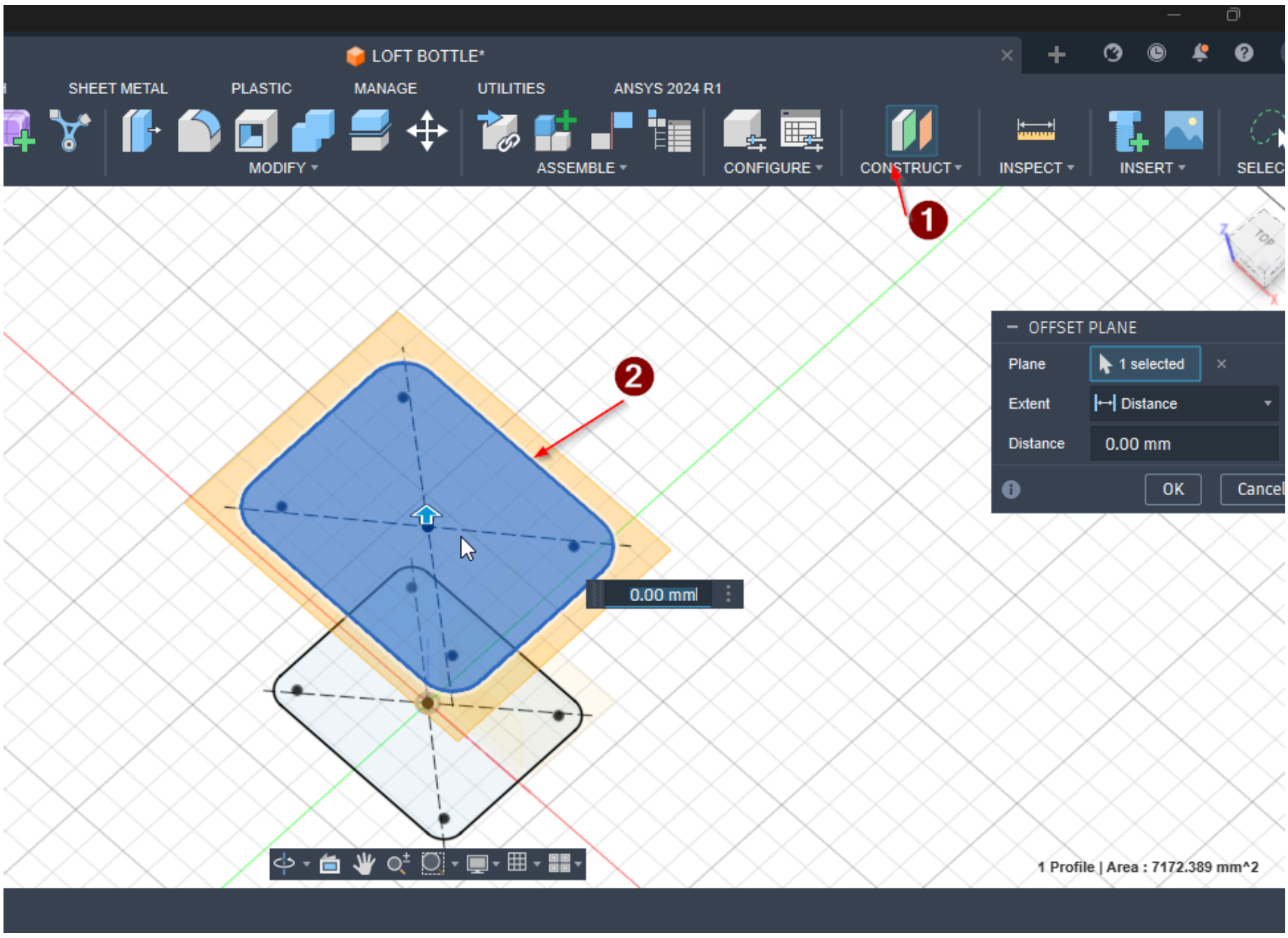
Choose **Center Rectangle** and set:

- Length: **95 mm**
- Width: **76 mm**

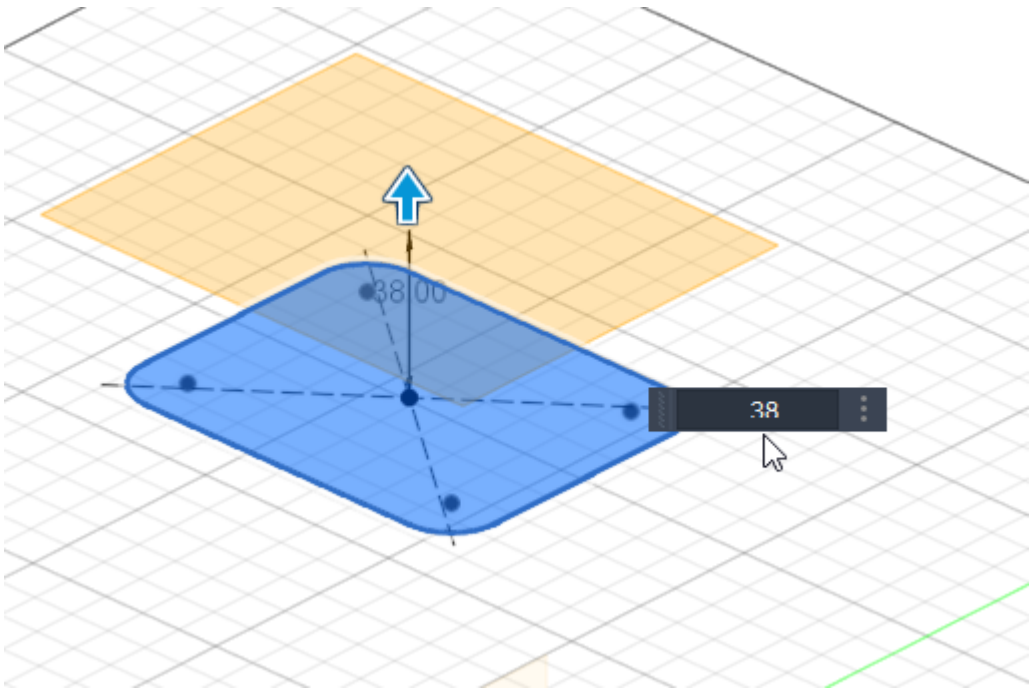


Apply **Fillet (R = 12 mm)** to all corners.
Finish Sketch.

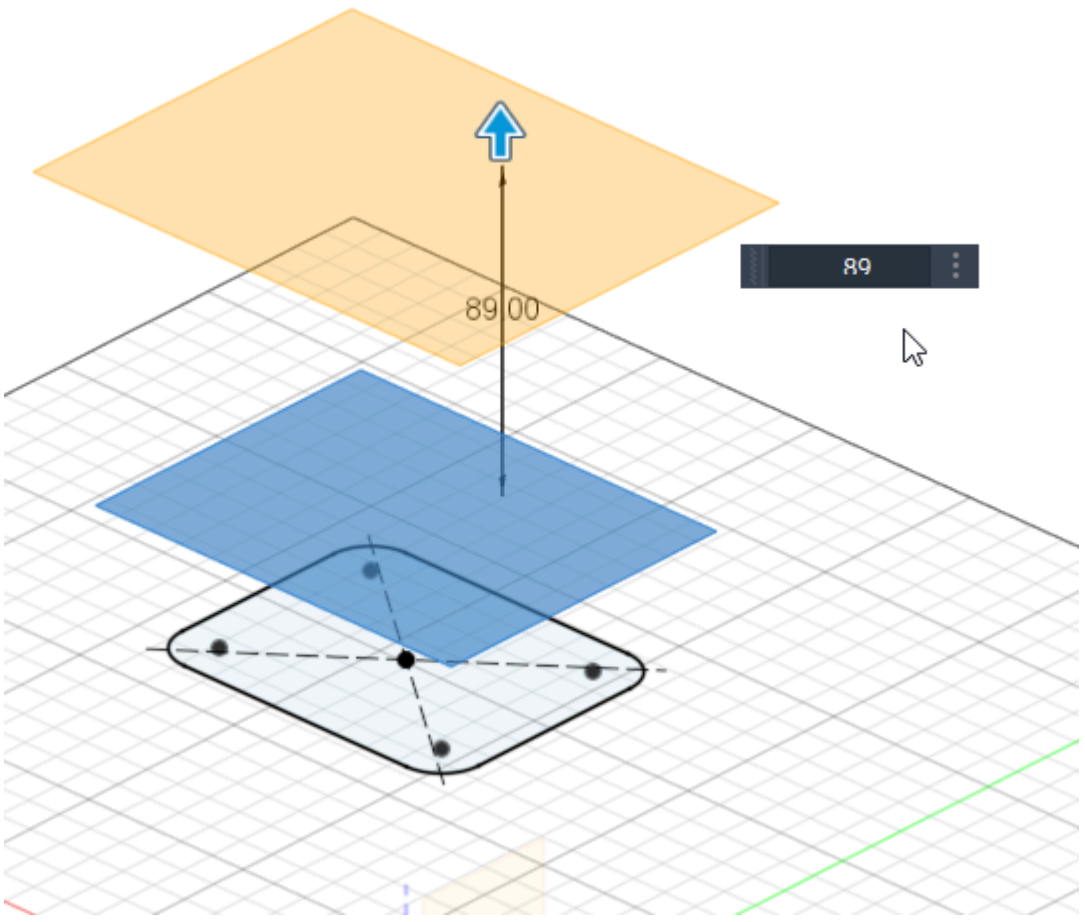
7. Create Two More Offset Planes



1 — Go to **Offset Plane**
2 — Choose previous plane → Offset by **38 mm**



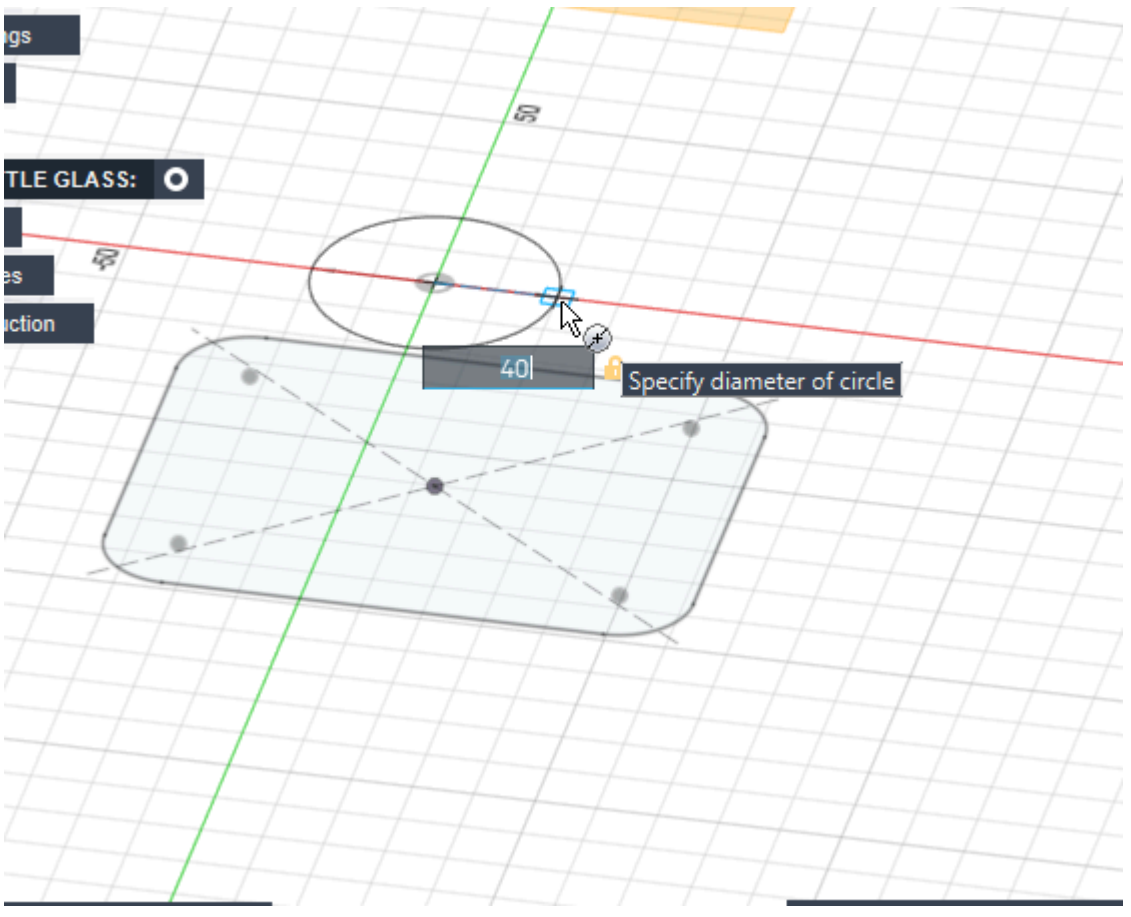
Create another plane **89 mm** above the previous one.



Your planes should look like this.

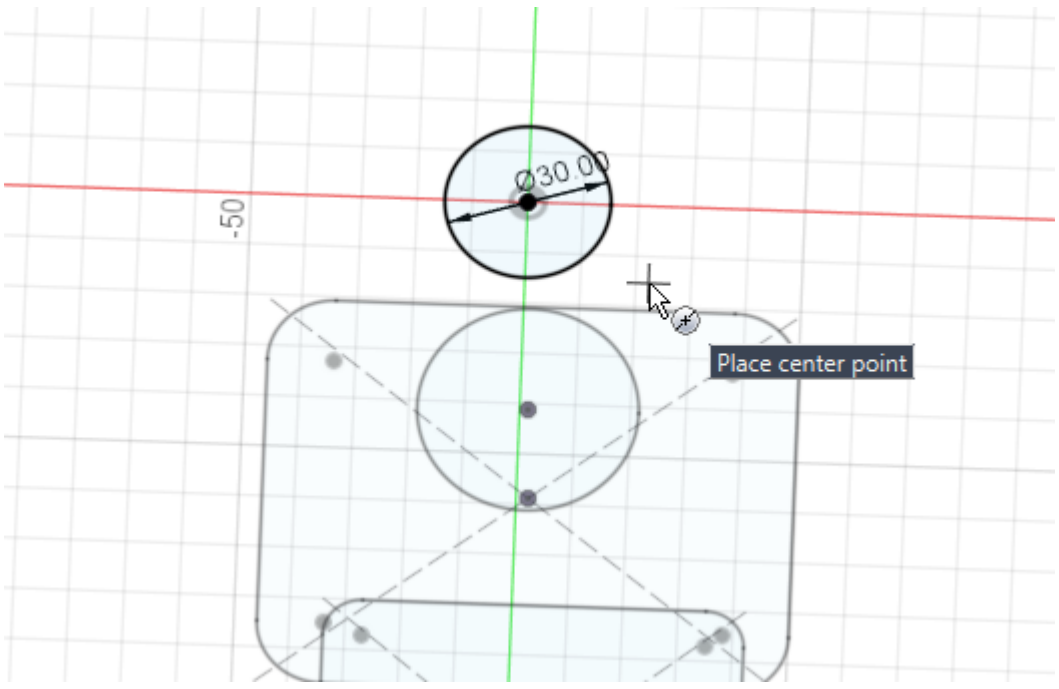
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8. Draw Circular Profiles



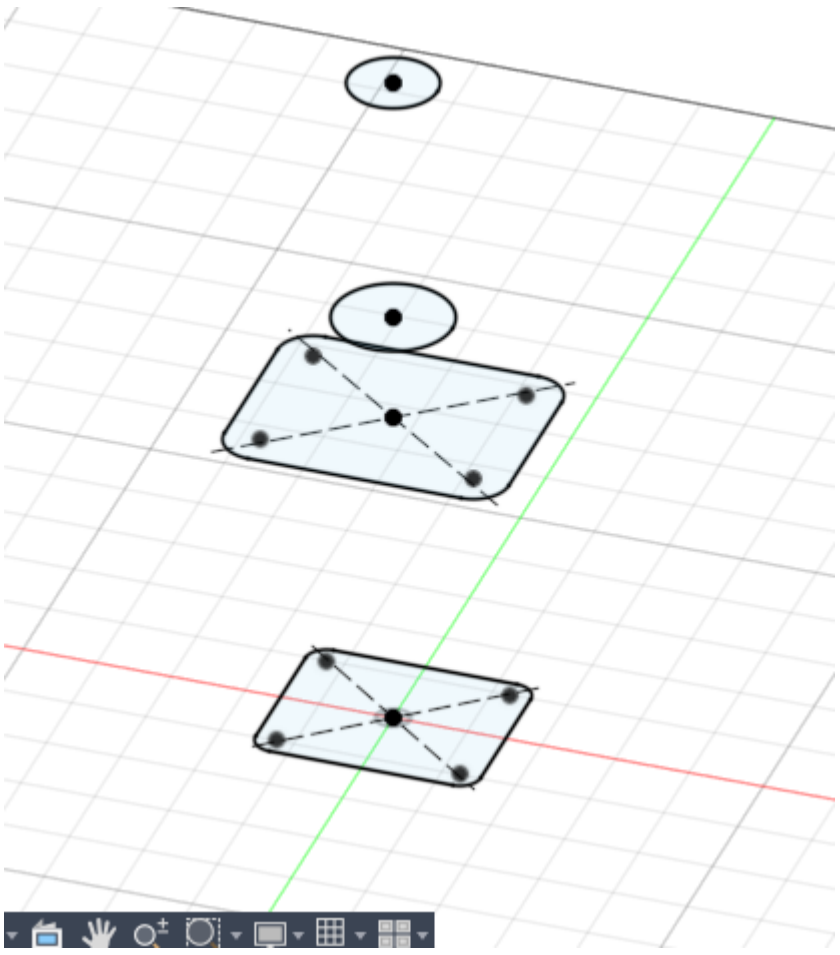
On the lower circle plane:

- Draw **40 mm** diameter circle.



On the upper circle plane:

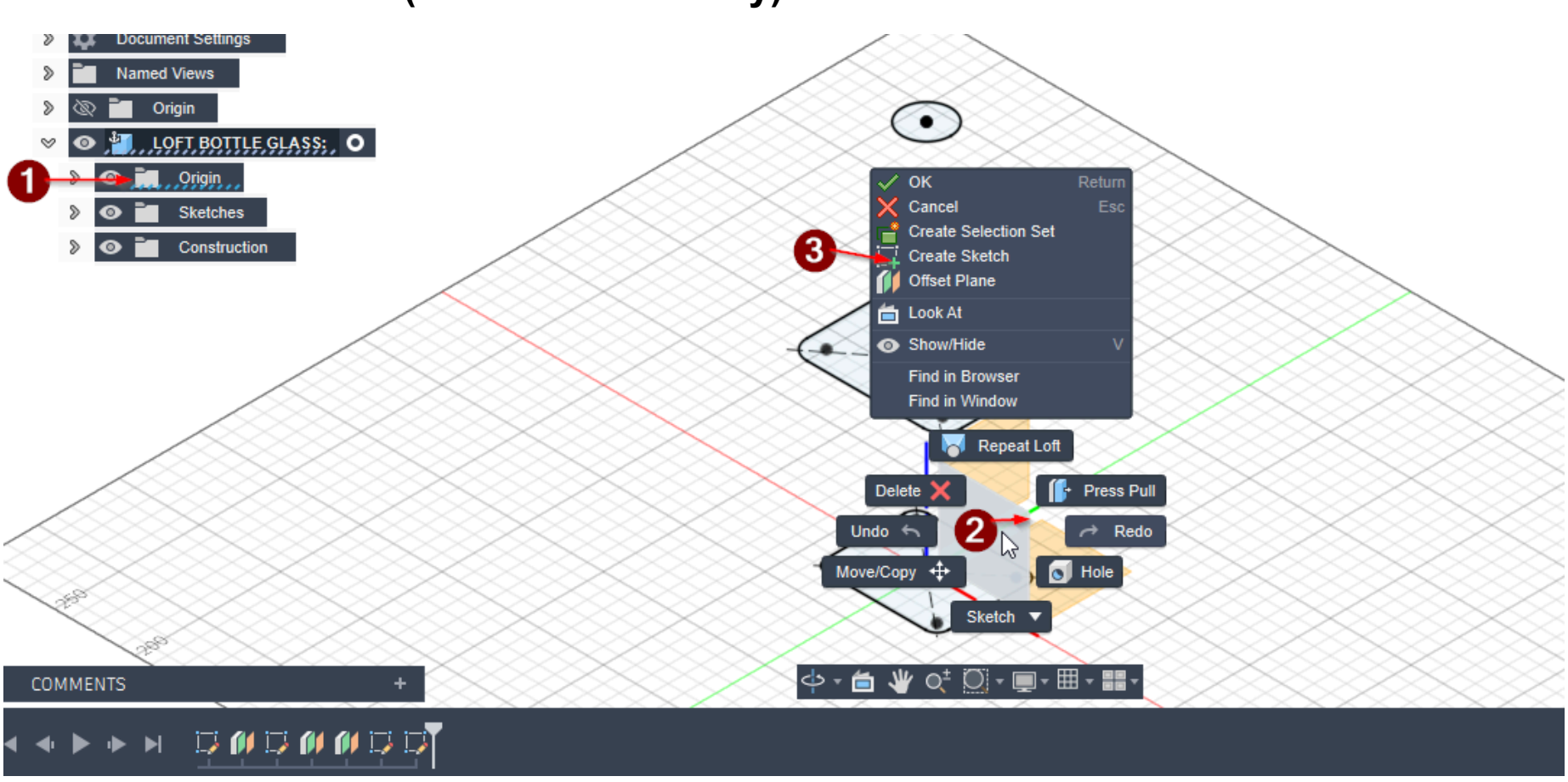
- Draw **30 mm** diameter circle.



All four profiles are now complete.

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9. Create Guide Rails (Intersect Geometry)



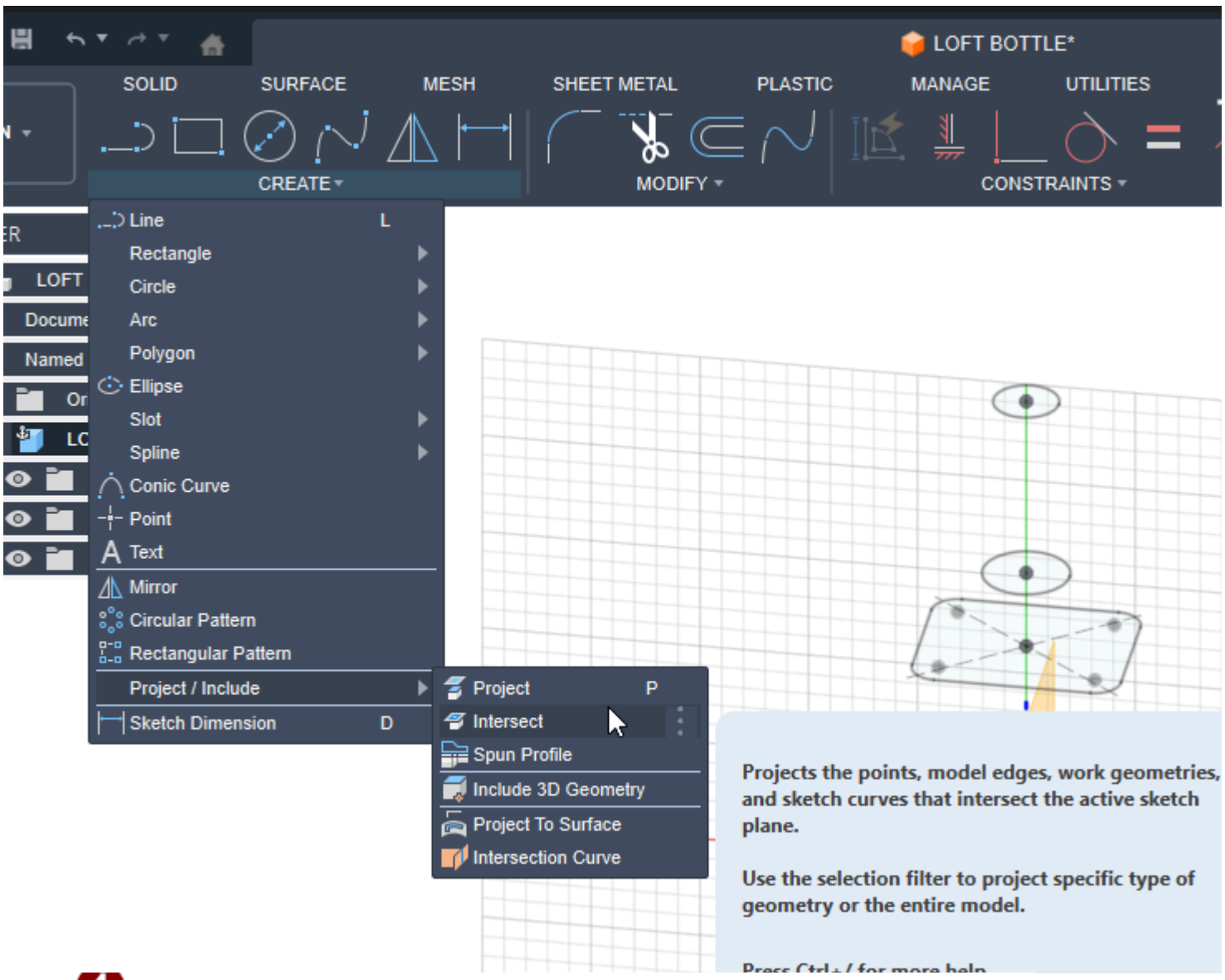
1 — Turn on **Origin**

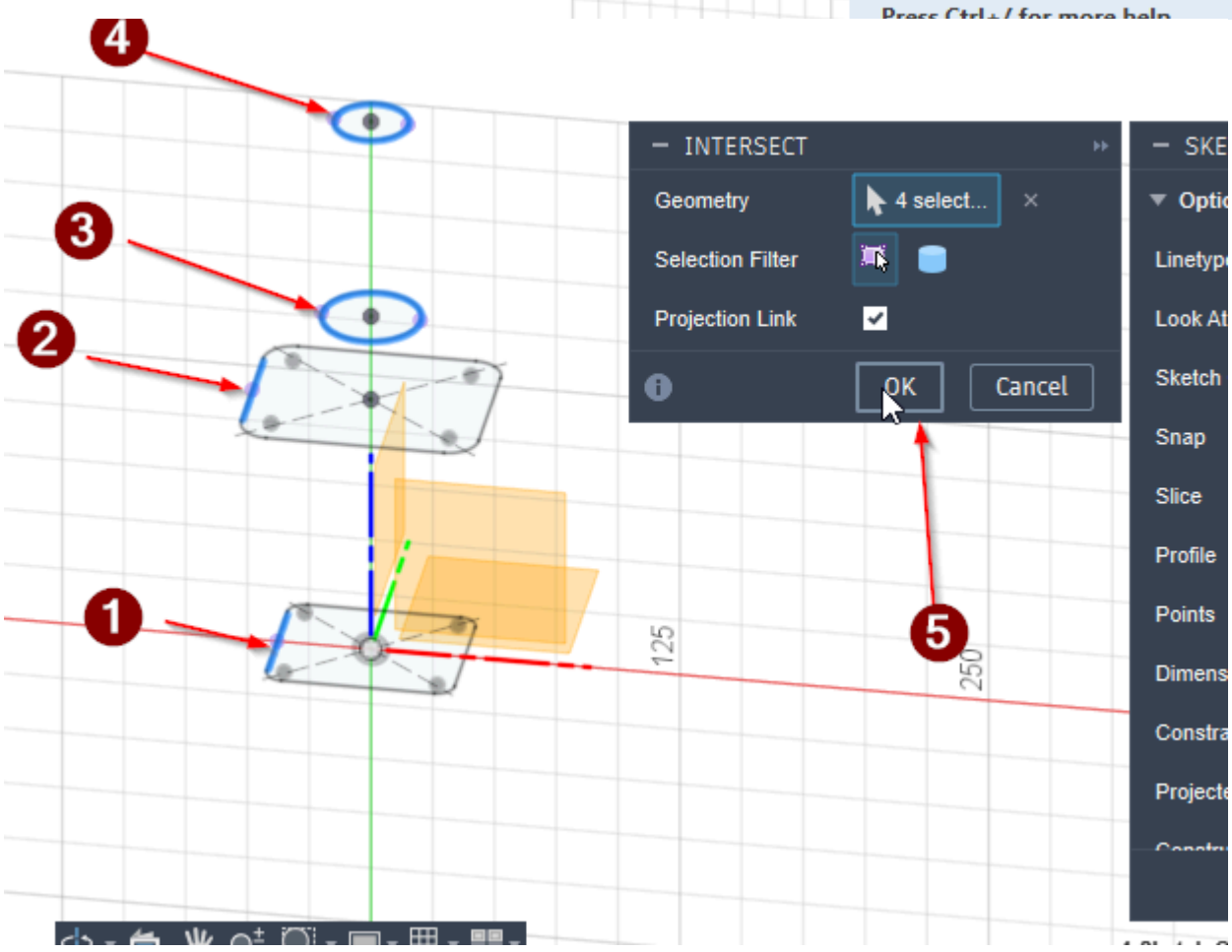
2 — Right-click the **XZ plane**

3 — Select **Create Sketch**

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10. Use Intersect to Project Profiles



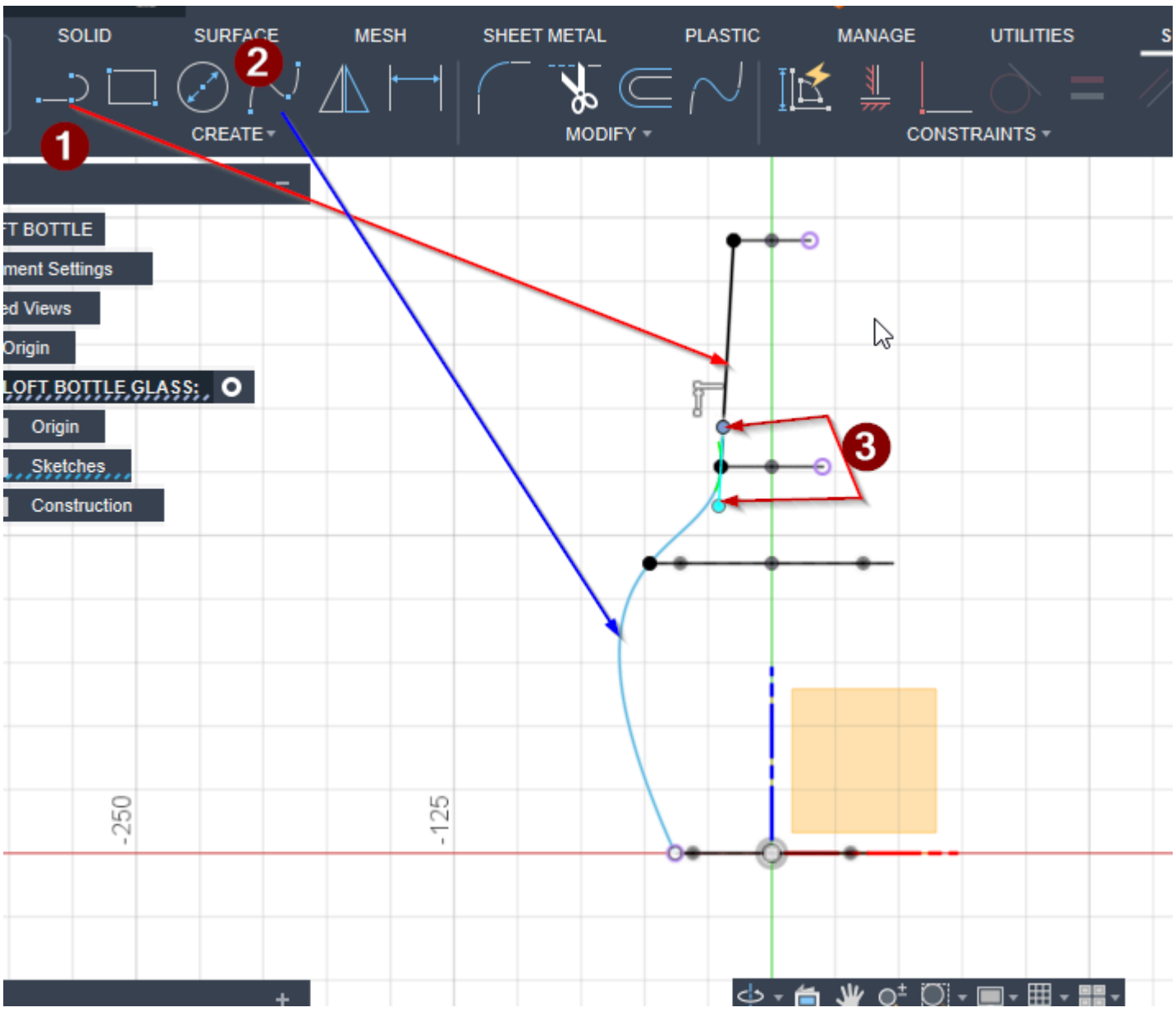


Go to **Create** → **Project/Include** → **Intersect**.

Select all profiles on **one side**.
Click **OK**.

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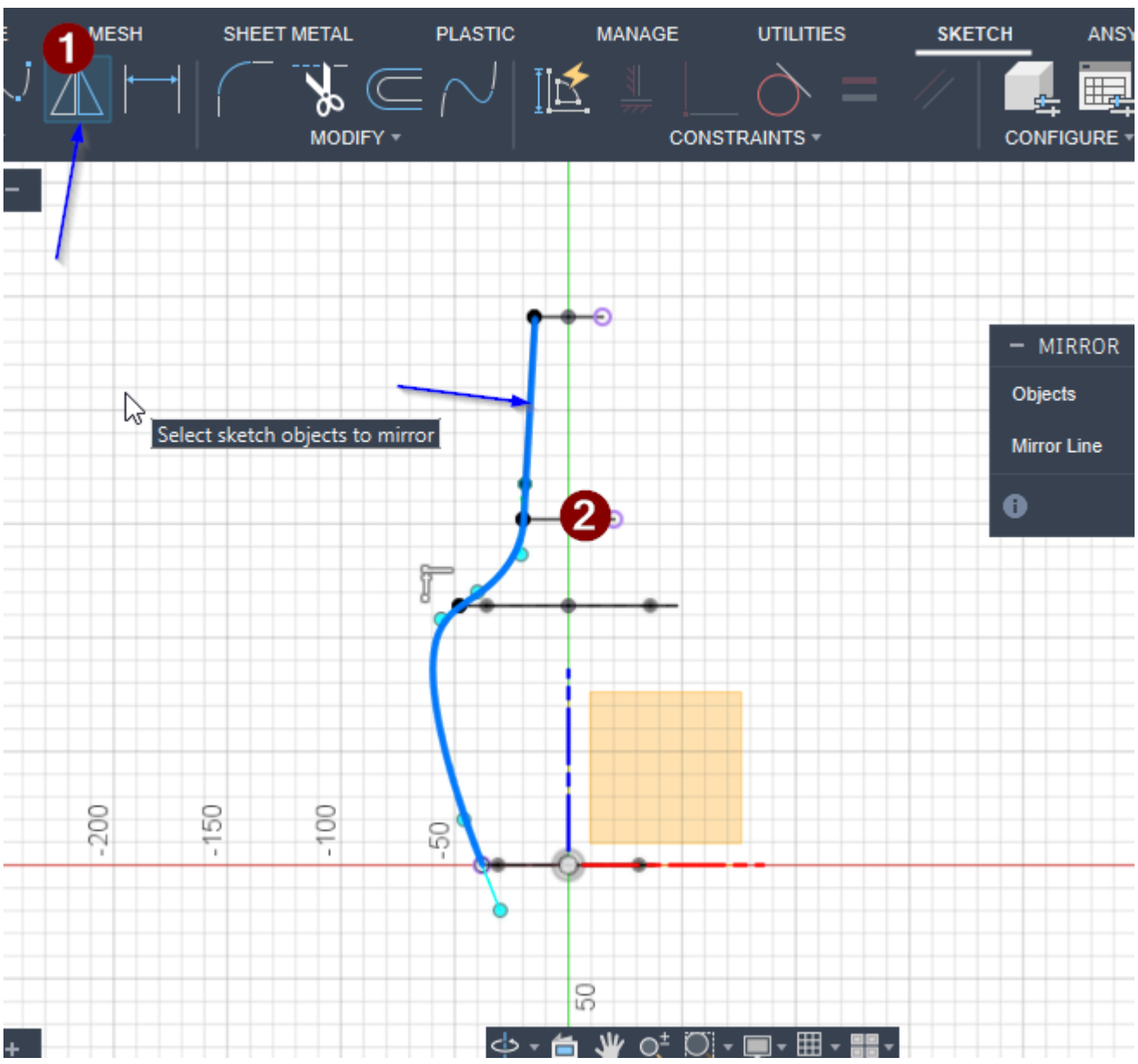
11. Draw Line + Fit Point Spline



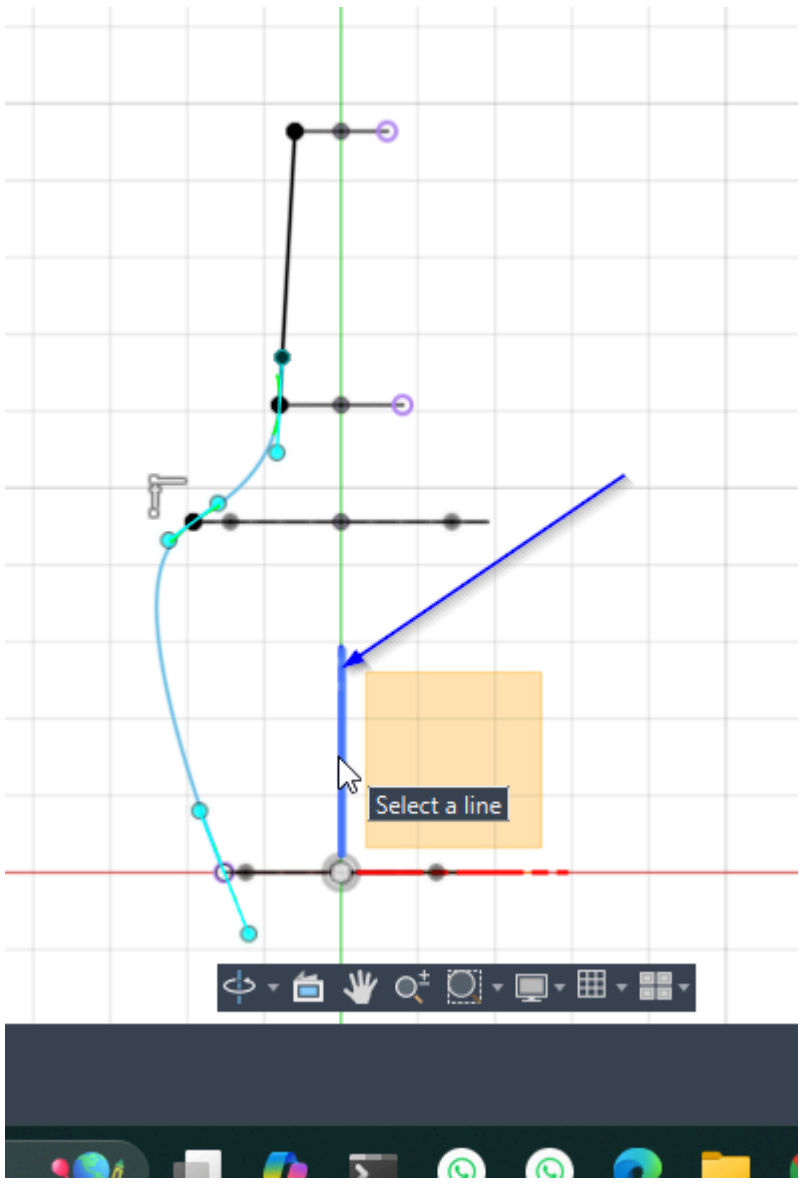
1 — Draw a **line** connecting the two top circle points
2 — Use **Fit Point Spline**
3 — Drag spline end so it *snaps onto the straight line* (must be continuous!)

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12. Mirror the Rail



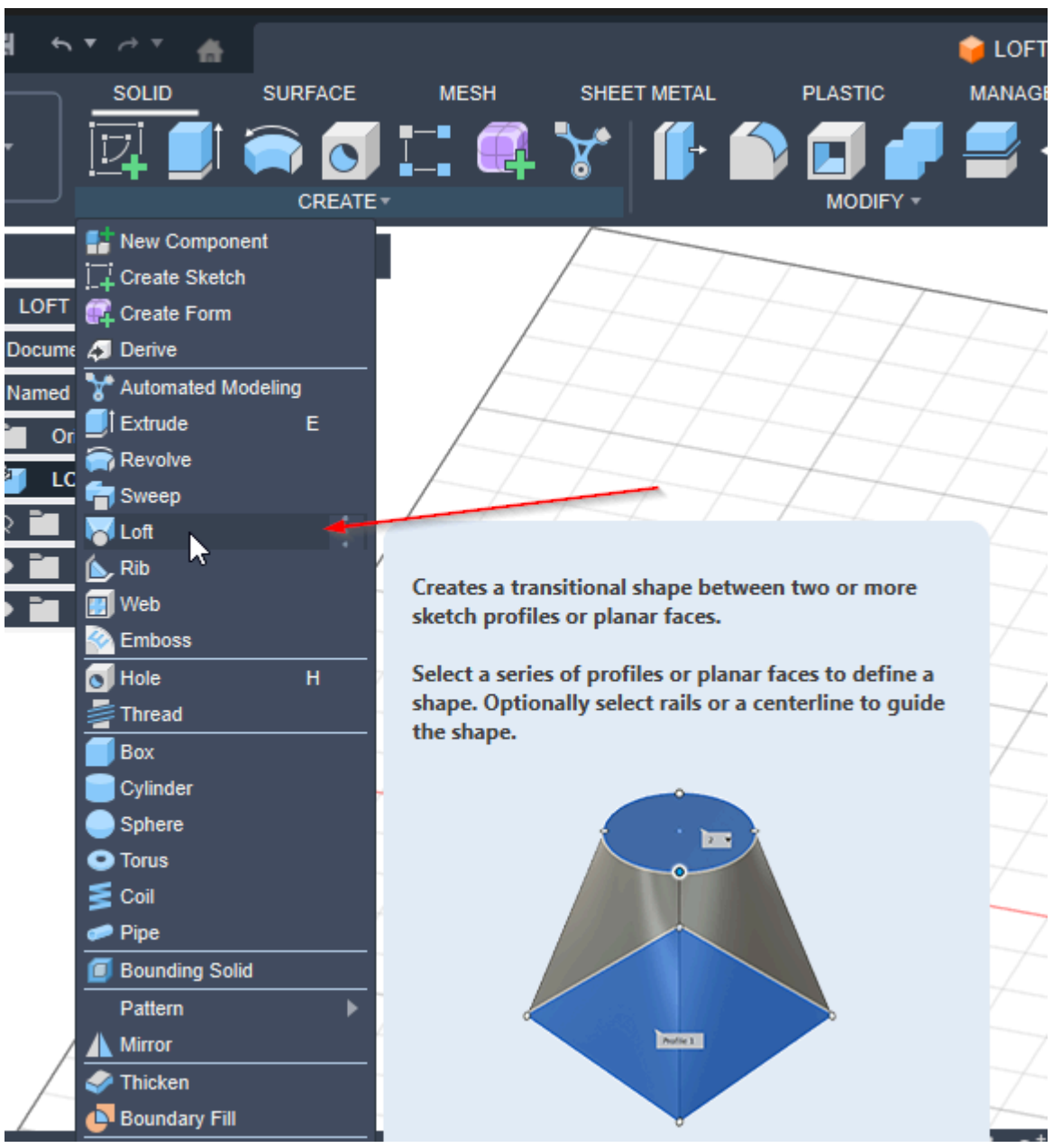
1 — Choose **Mirror** (Sketch Mirror)
2 — Select the **line + spline**



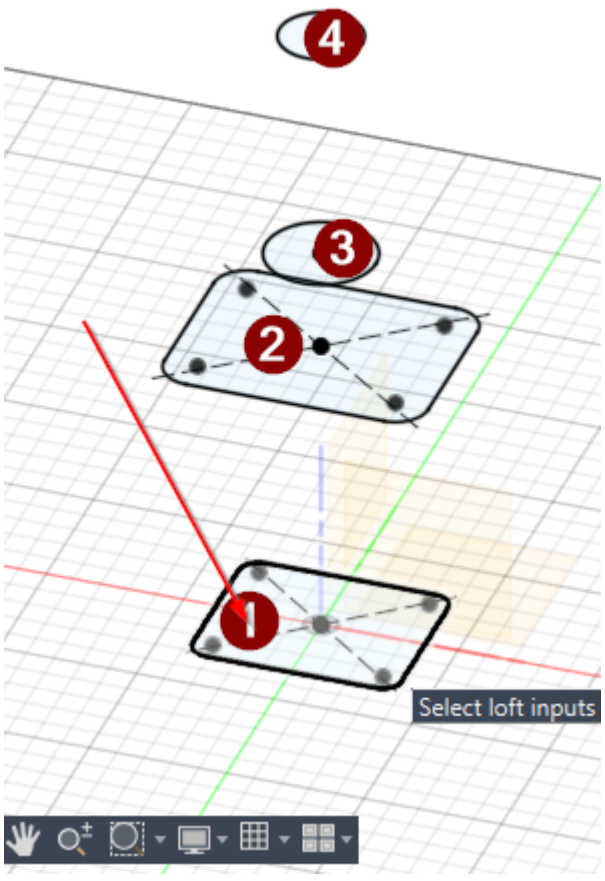
Select **Z-axis** as mirror line.

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13. Loft All Profiles

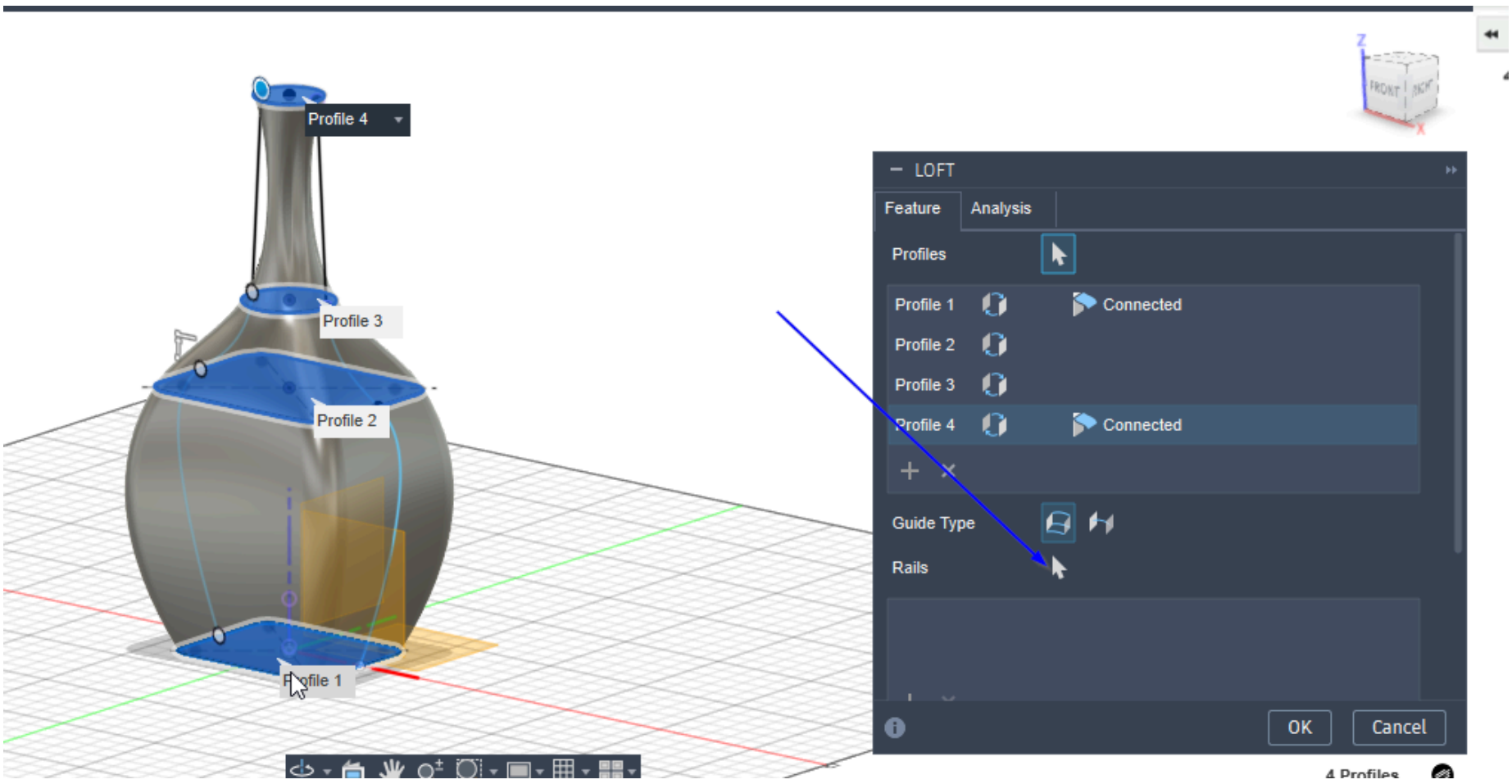


Activate **Loft**.

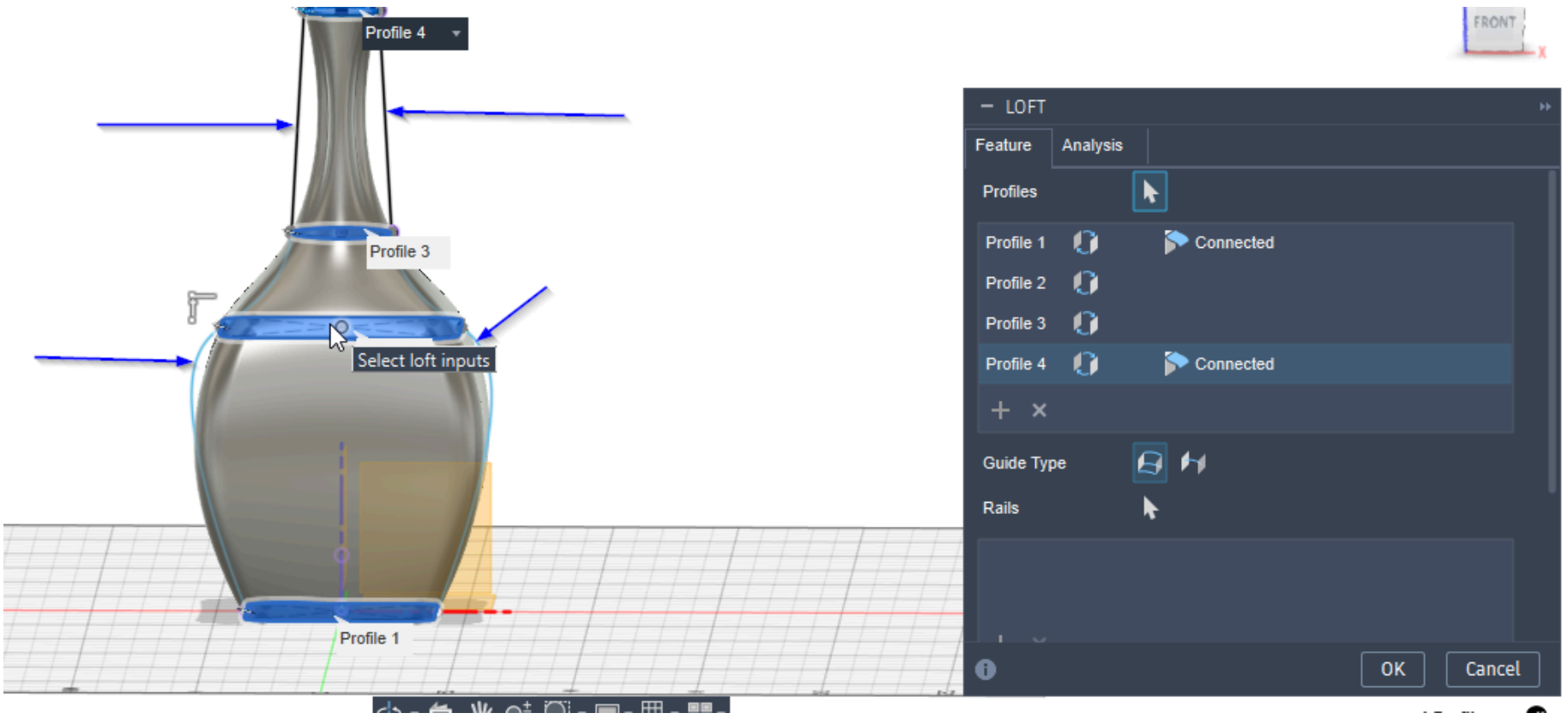


Select profiles **from bottom to top**, one by one.

14. Add Guide Rails



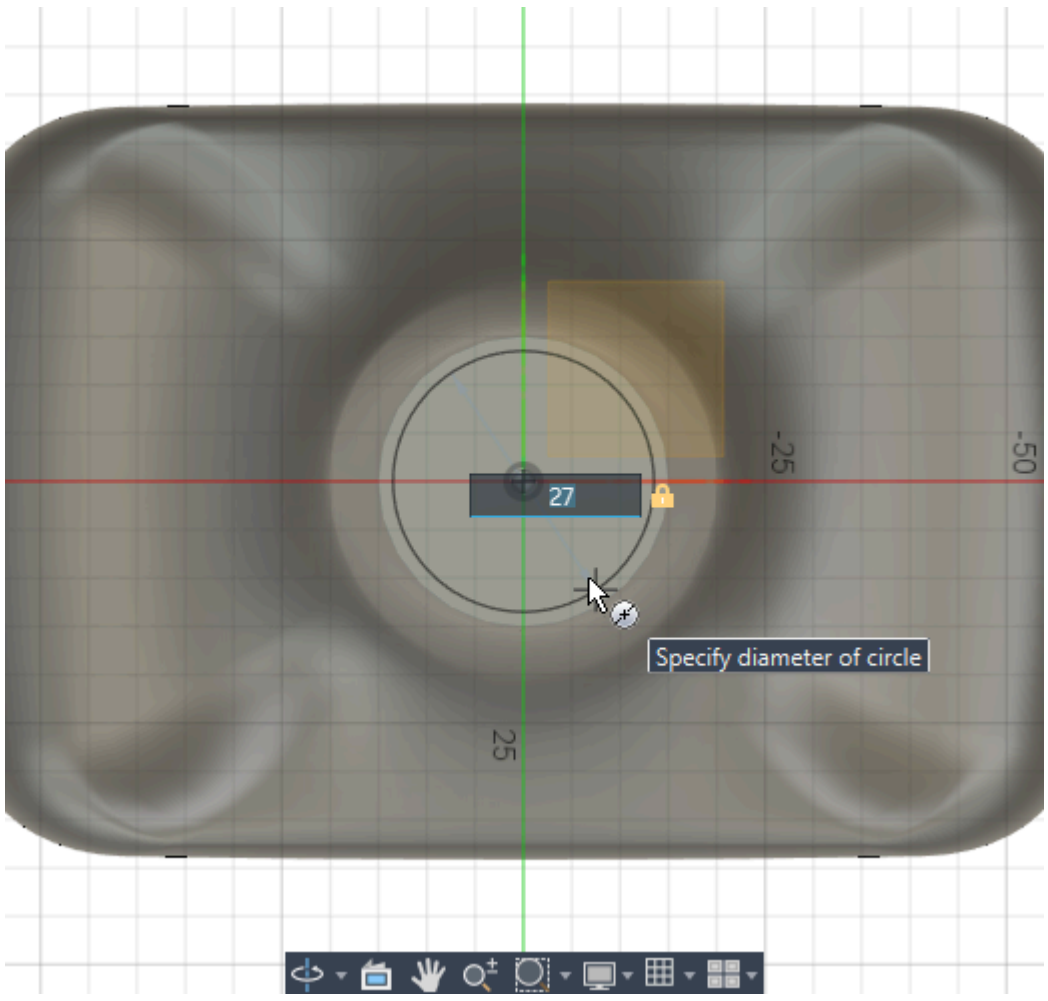
Click **Rails** and select both guide rails.



Bottle shape updates according to rails.

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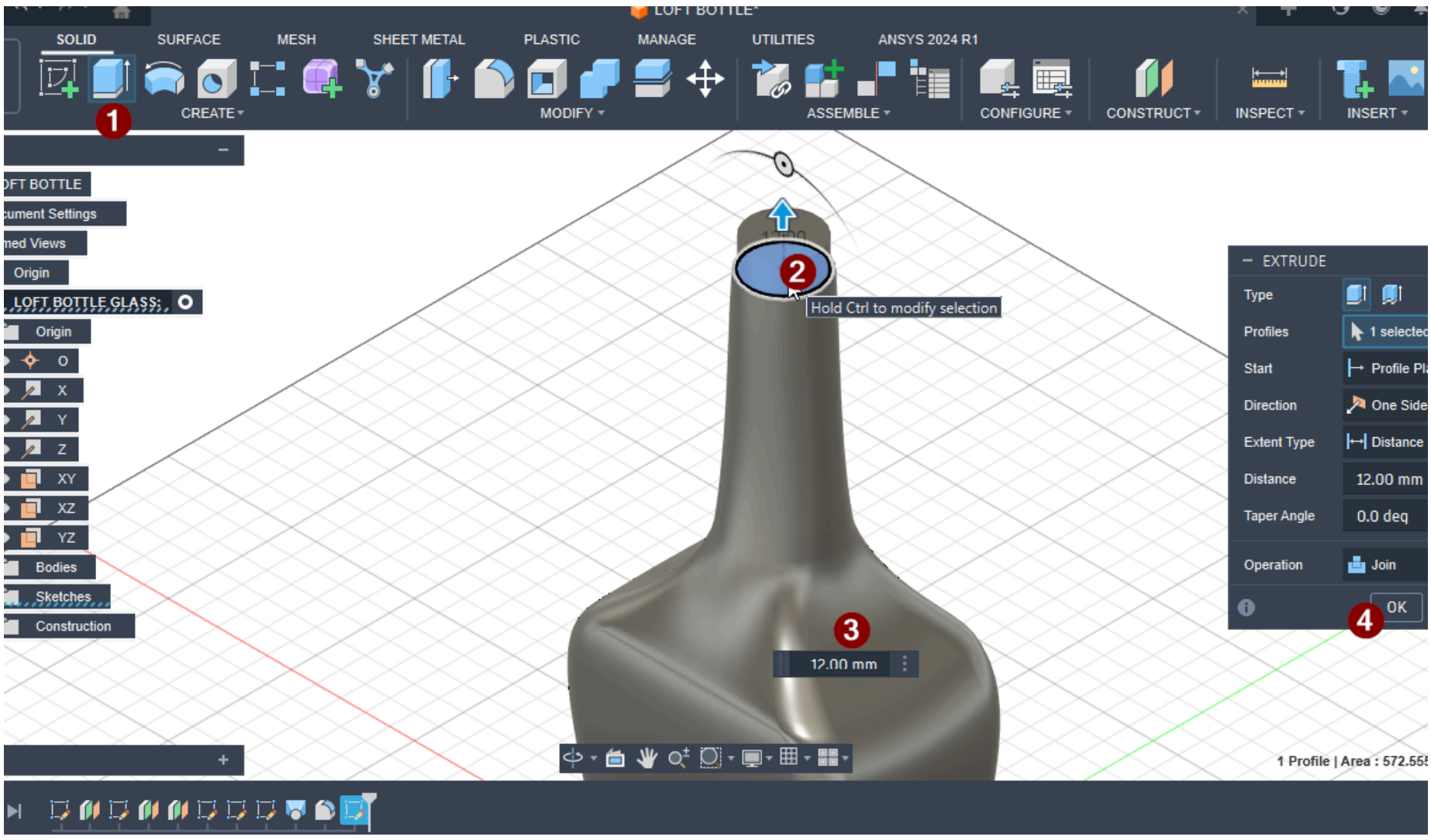
15. Add Bottle Neck



Draw **27 mm circle** on top face.

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16. Extrude Bottle Neck



1 — Extrude
2 — Select top circle
3 — **12 mm** height
4 — Operation: **Join**

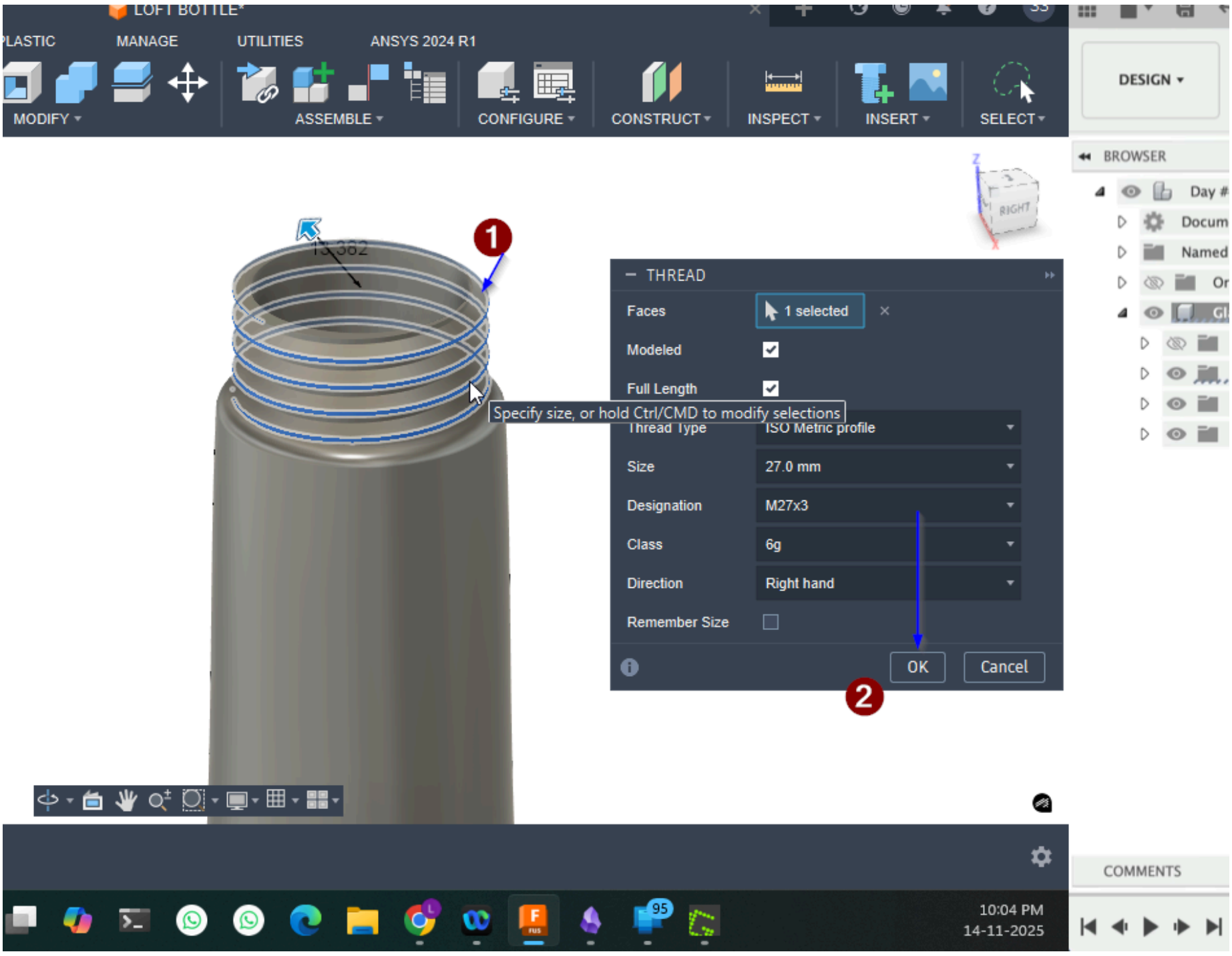
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17. Shell the Bottle

1 — Shell
2 — Set thickness: **2 mm**
3 — OK

18. Add Thread to Bottle Neck

Activate **Thread**.



Select the surface → Enable **Modeled** → Choose thread type → OK.
