Task 5: Sculpt

Objectives

- By the end of this session, you will:

- Be able to model the desktop lamp stand using the free-form sculpt environment.

- Know how to edit the form

- https://moeae87206-my.sharepoint.com/personal/felicity_dray_moe_gov_ae/_layouts/15/guestaccess.aspx?docid=085684b2ec0194792ac39497246a098b3&authkey=AbrvwywDfeD1lf95r1K4oaY
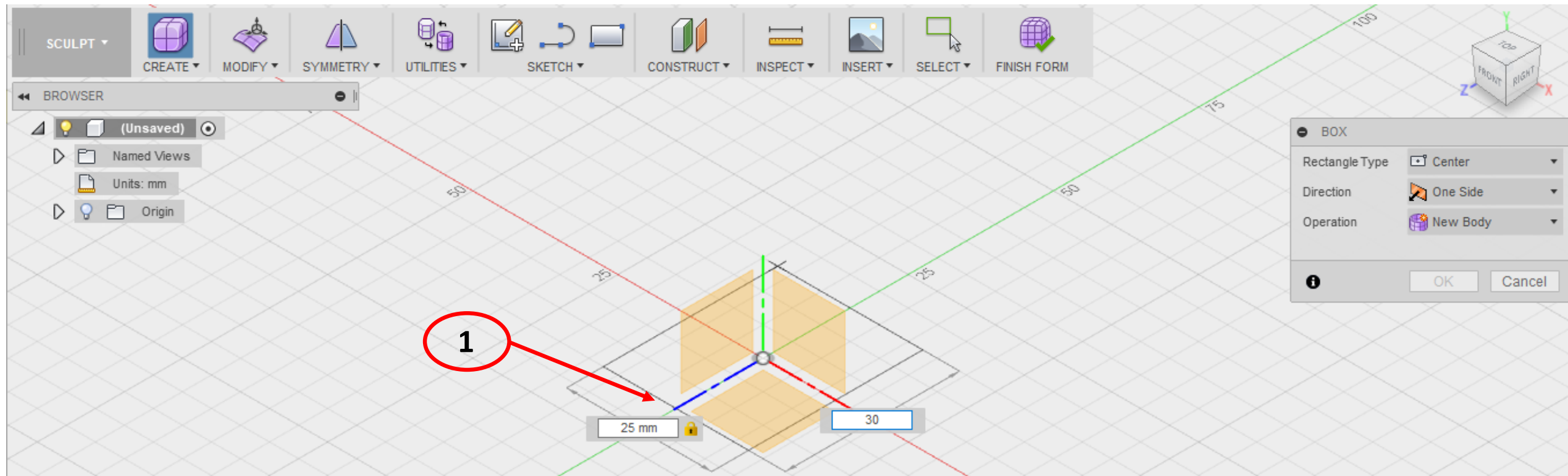
Step 1: Model the Stand

1. Select File > New Design.
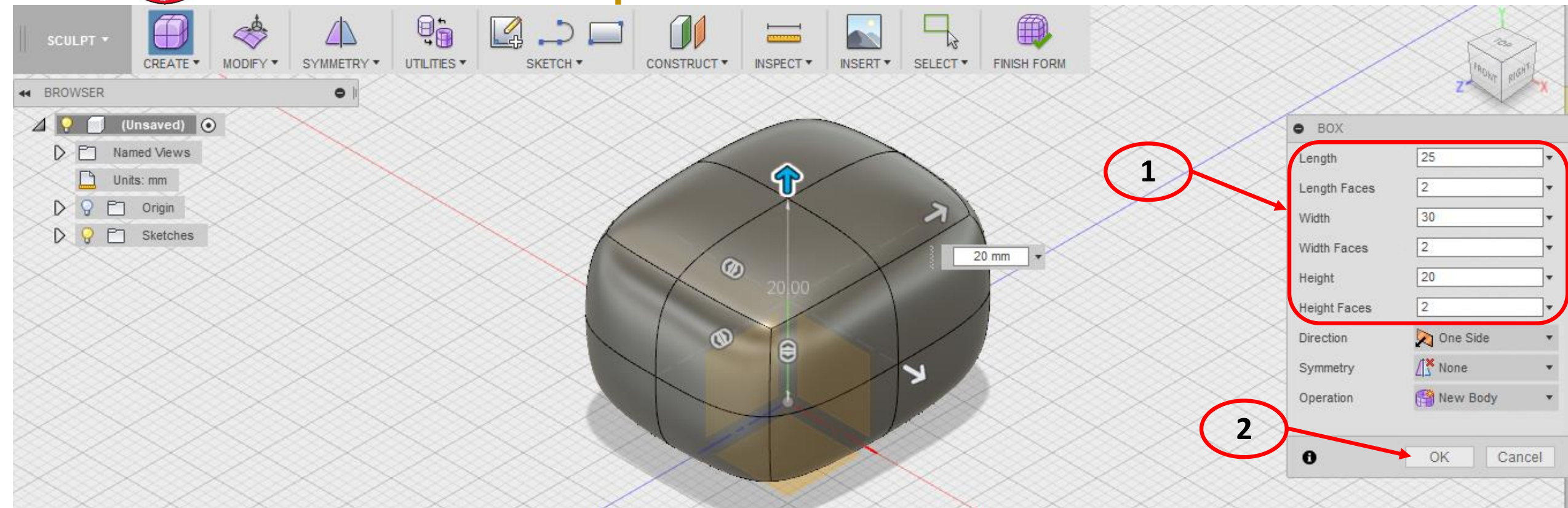
2. Select Form Icon

3. Select Create > Box

4. Select the Top Plane

Step 1: Model the Stand

1. Click on the plane to draw rectangle
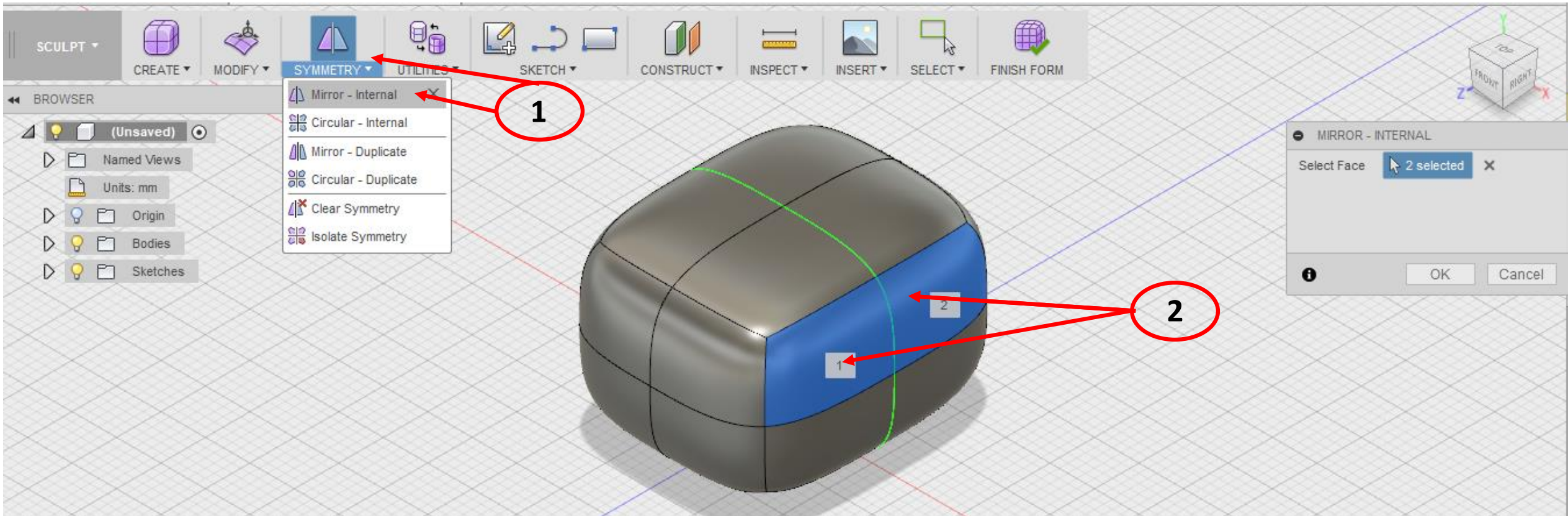
2. Dimension Side A 25mm

3. Dimension Side B 30mm

1. Make Length 25mm , Width 30mm, Height 25mm, Set all faces as 2.

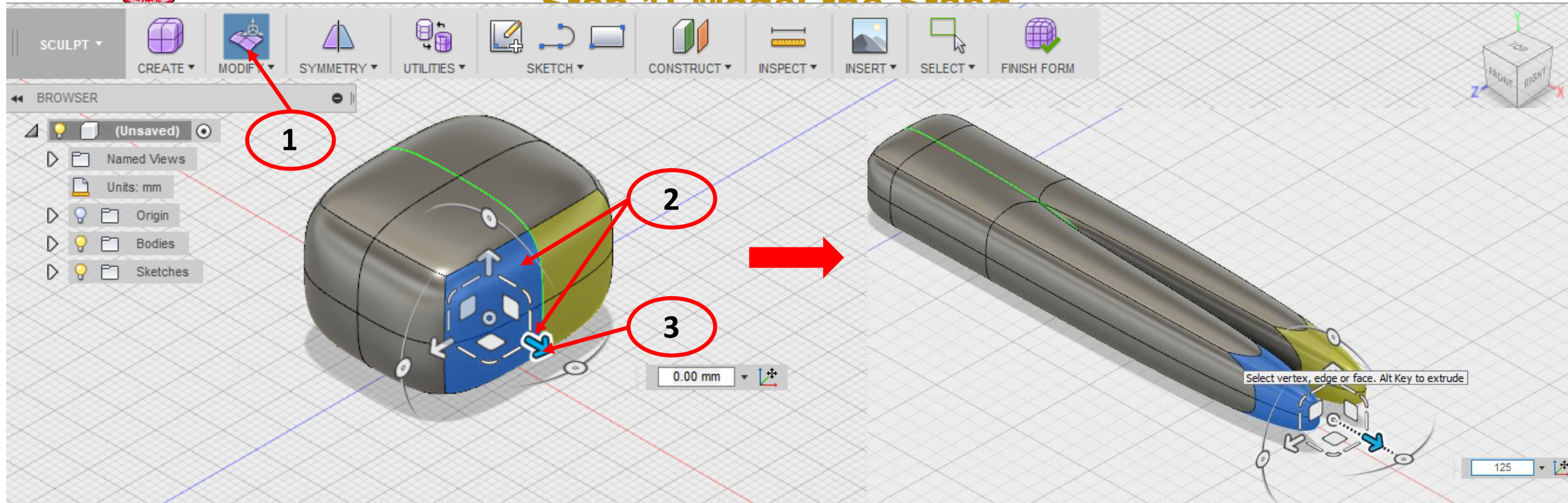2. Select ok.

3. Now we have a form ready to edit and shape.
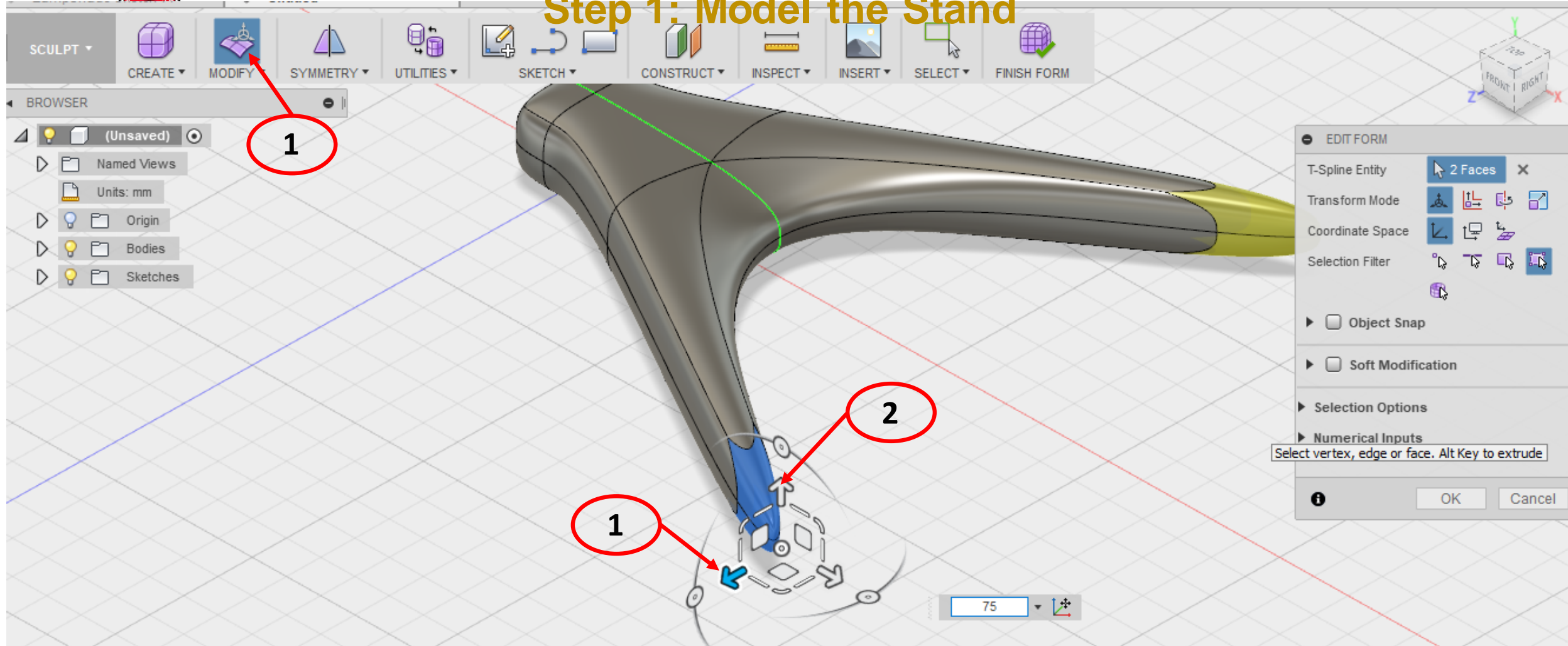
1. Select Symmetry > Mirror Internal
2. Select the two faces as shown.

1. Select Edit form Icon

2. Select the two faces as shown in blue. (Hold CTRL key for multiple selections.

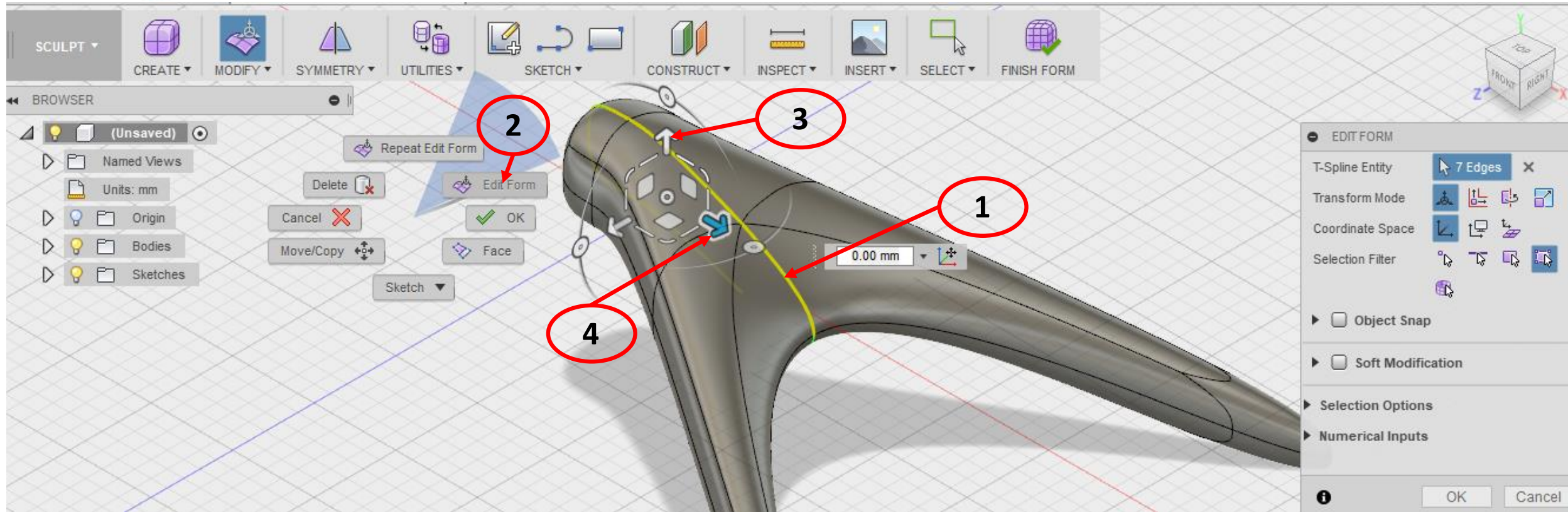3. Hold down the ALT key and drag the manipulator as shown.
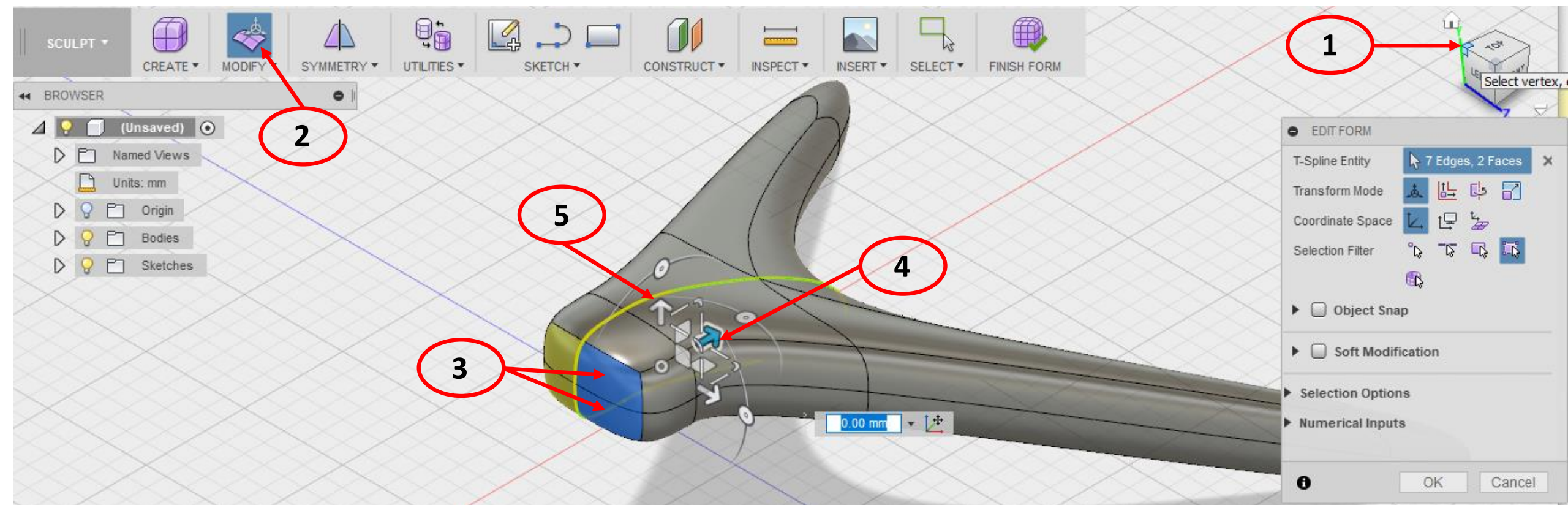
4. For distance, enter 125.

1. Select Arrow shown. Drag out > enter distance 75mm

2. Select Arrow shown and drag down > enter distance -50mm (negative value)

Step 2: Edit the Form

1. Double click line as shown

2. Right click on Canvas > select edit form

3. Select Arrow shown. Drag up > enter distance 5mm

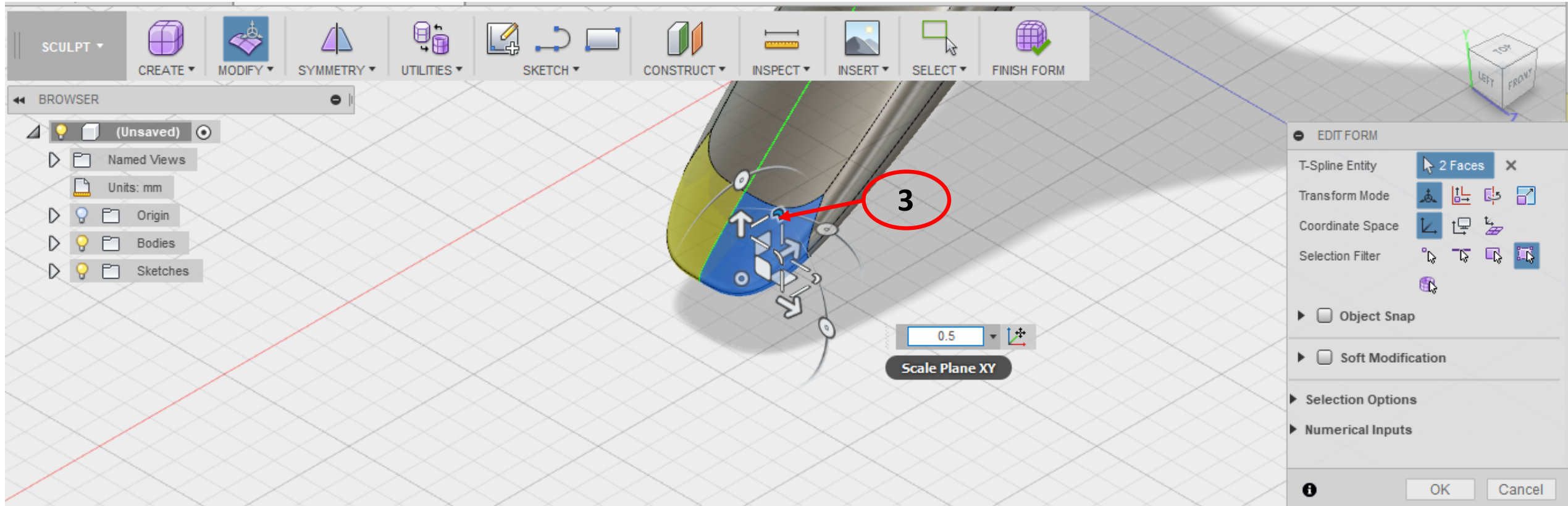4. Select Arrow shown and drag left > enter distance -5mm (negative value)

Step 2: Edit the Form

1. Select Corner of view cube to rotate to back

2. Select edit form icon.

3. Select the two faces shown

4. Select Arrow shown and drag back > enter distance -50mm (negative value)

5. Select Arrow shown and drag down > enter distance -50mm (negative value)
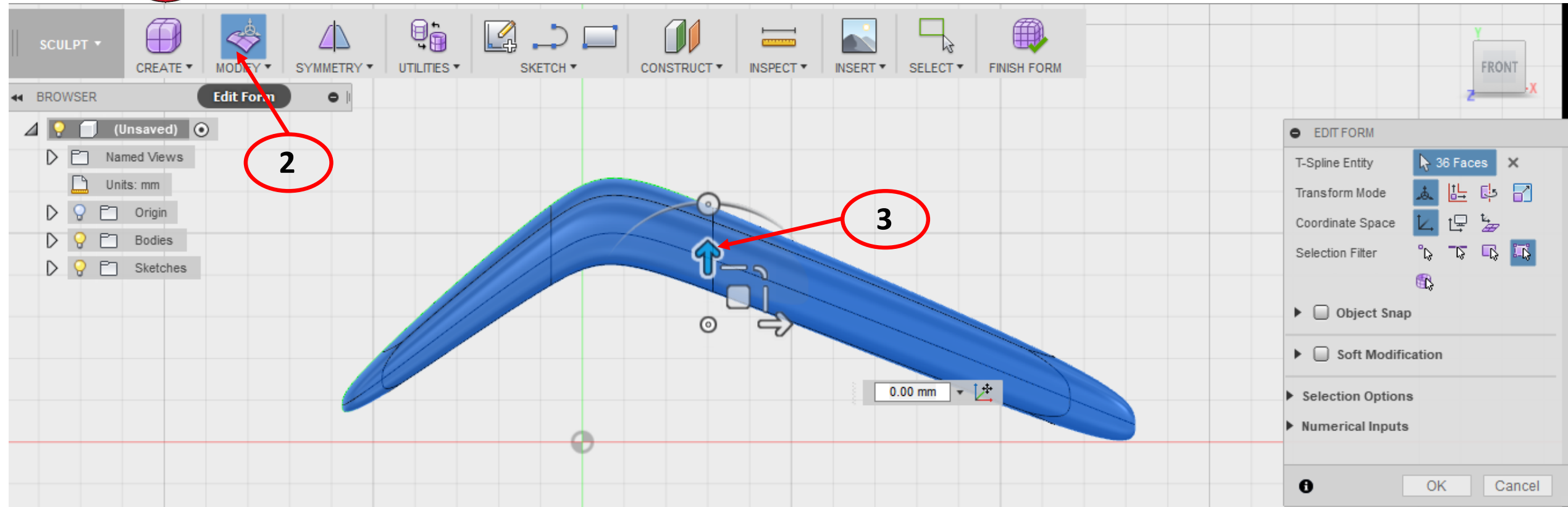
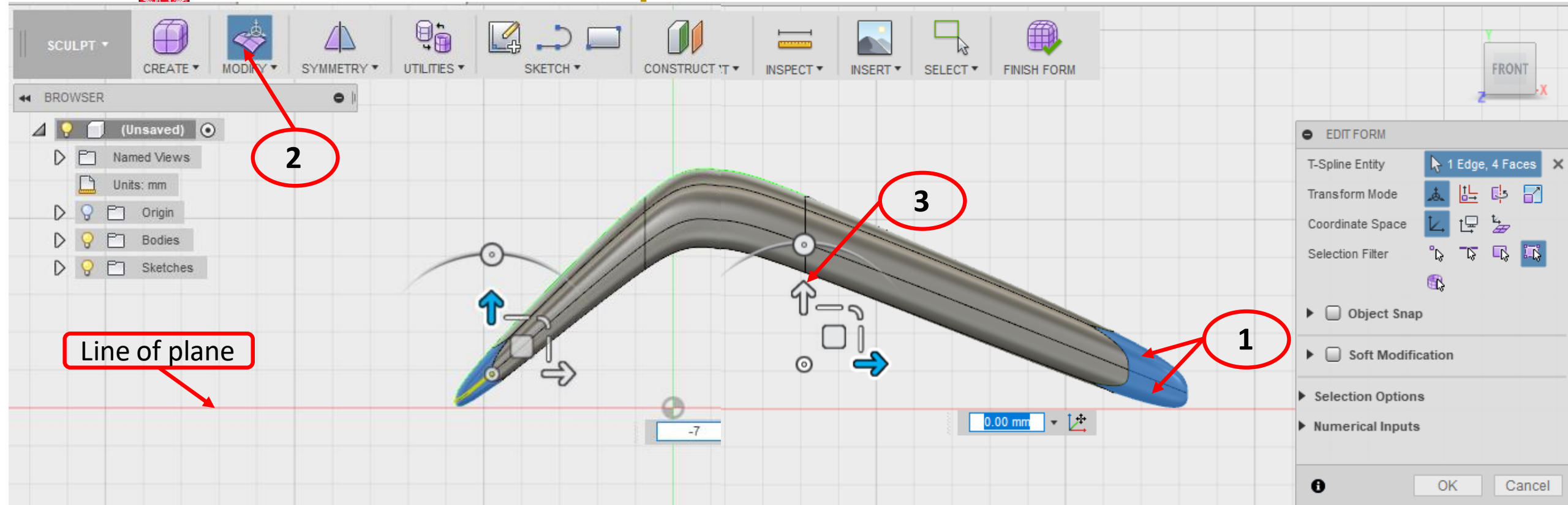1. Select the scale manipulator as shown.

2. Reduce to 0.5

Step 2: Edit the Form

1. Double click to select the whole model in blue
2. Select Edit Form icon
3. Drag Manipulator arrow up to align right leg with plane as shown.
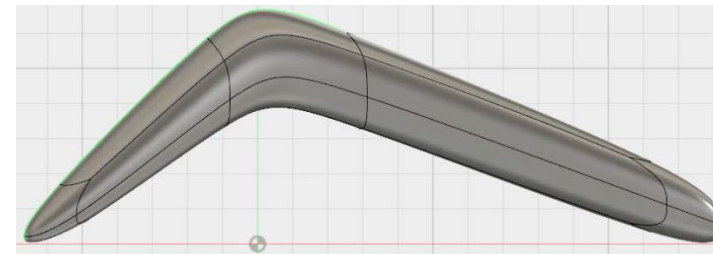
Step 2: Edit the Form

1. Hold CTRL and select two faces as shown.
2. Edit form
3. Drag arrow up or down to align exactly to plane.
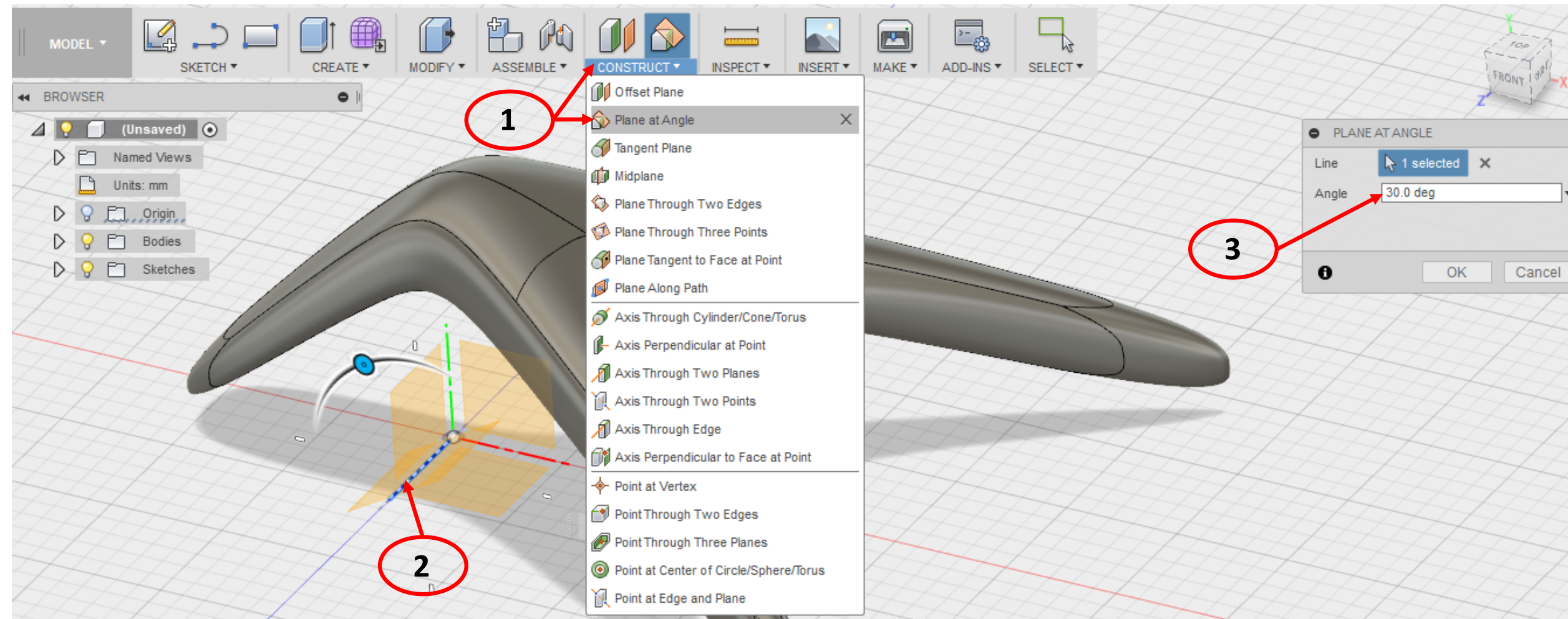4. Repeat With Left side of piece.

Step 2: Edit the Form

1. On the ViewCube, click Home.

2. Click Symmetry > Clear Symmetry.

3. Select the model. Click OK.
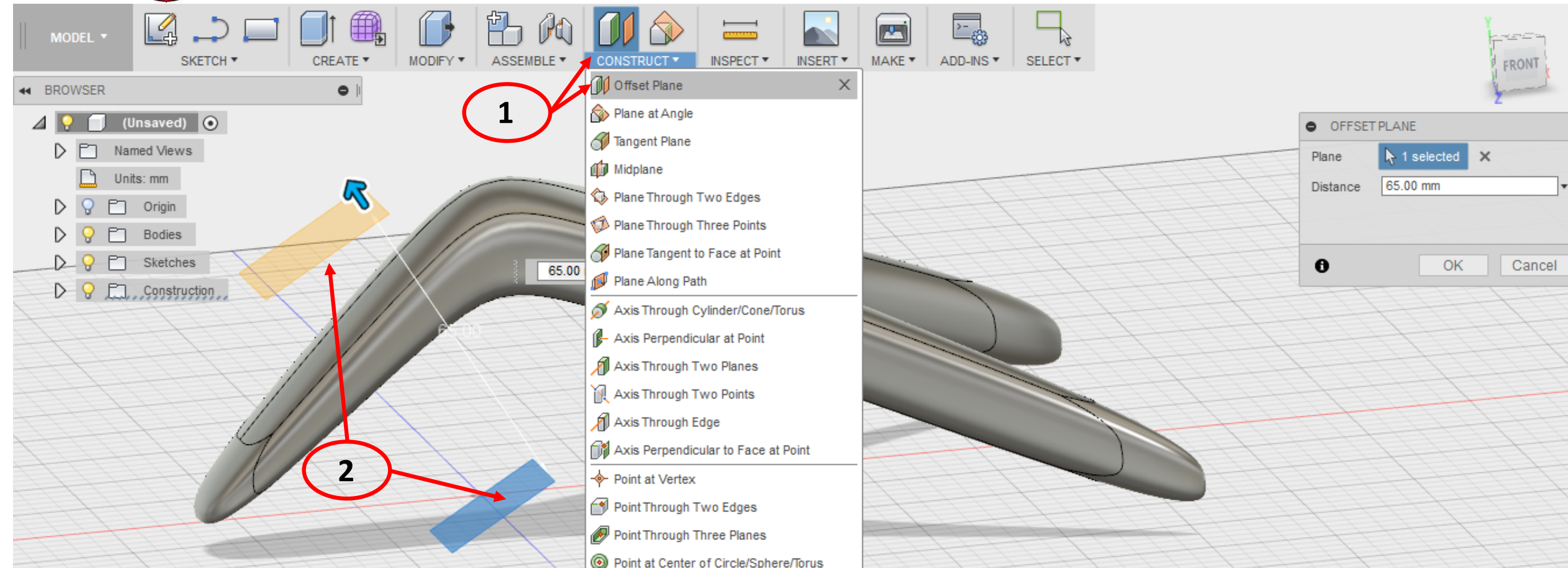
4. Click Finish Form.
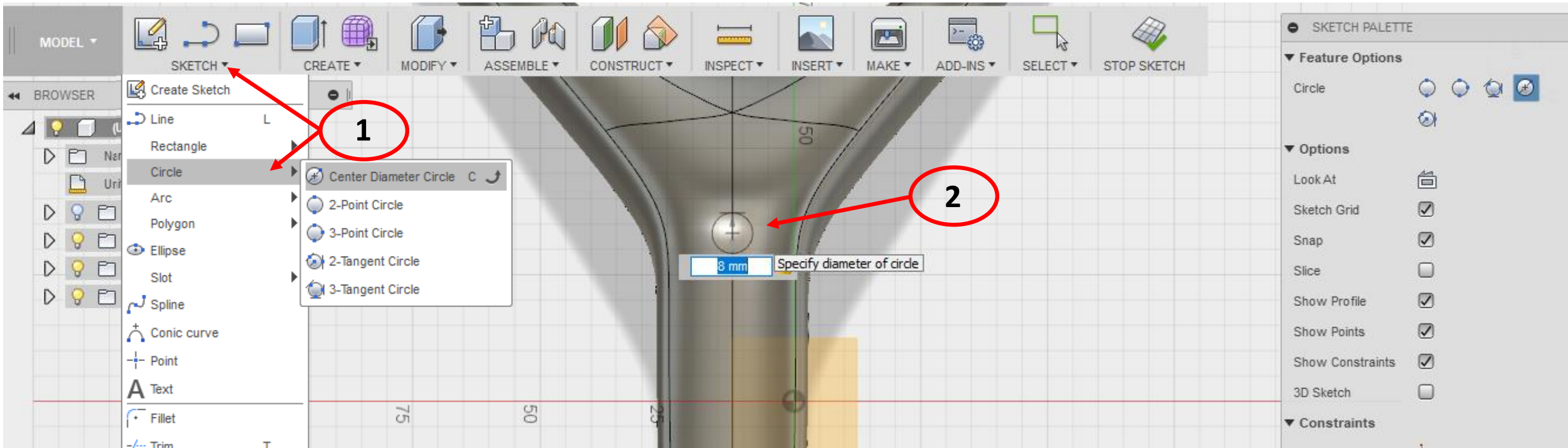
Step 3: Add a Hole

1. Select Construct > Plane at angle

2. Select the axis shown

3. Enter 30 degrees as angle and select ok.
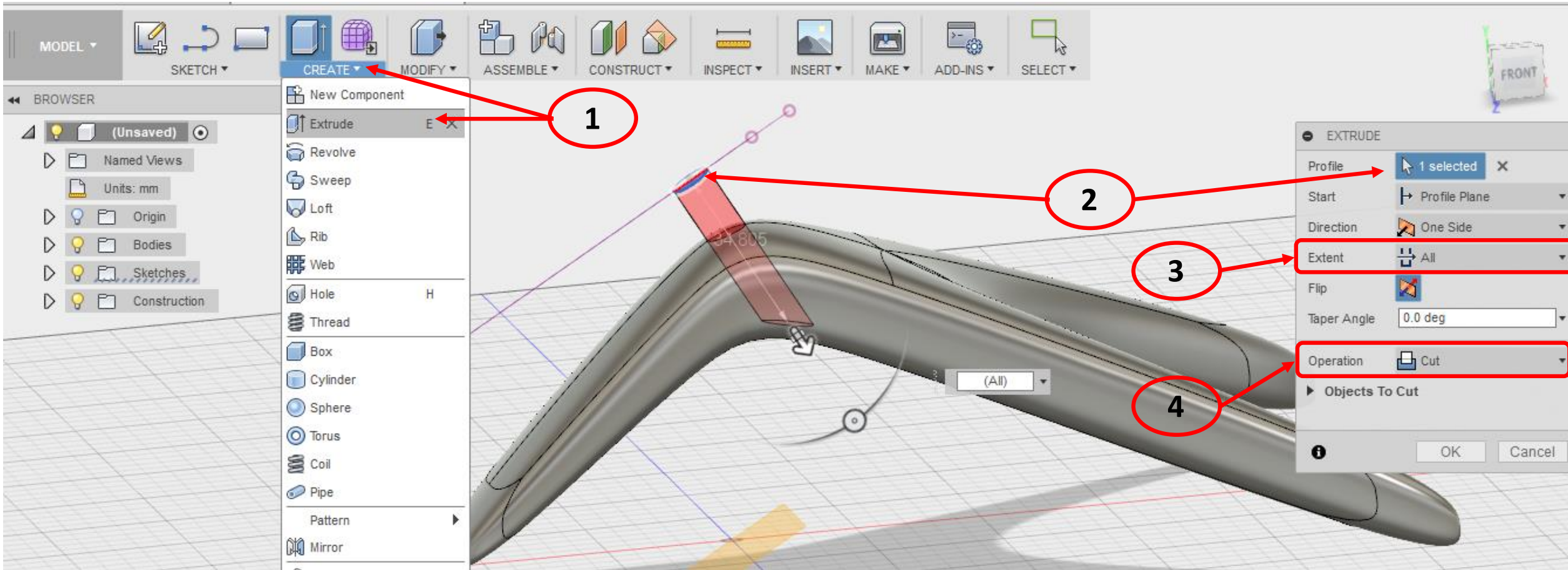
Step 3: Add a Hole

1. Select Construct > Offset Plane

2. Select angled plane and drag above model as shown
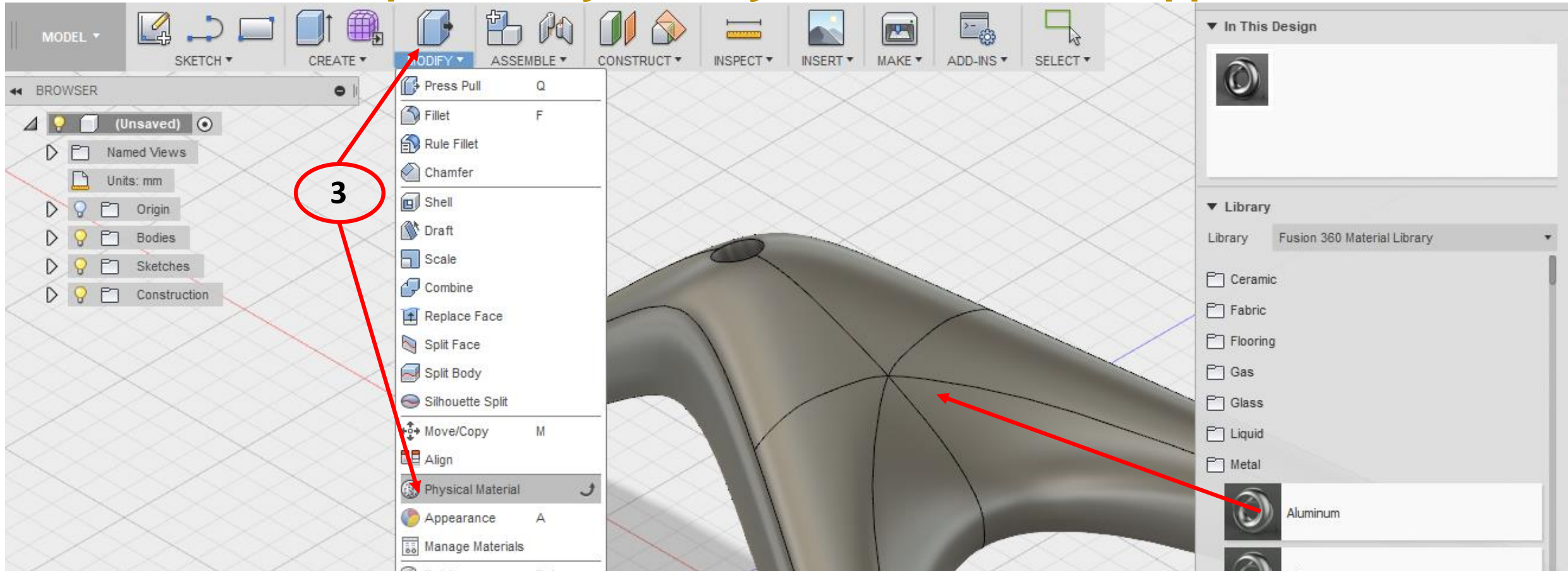
Step 3: Add a Hole

1. Select Sketch > Circle > Center Circle

2. Select offset plane and draw circle along centre line as shown

3. Enter Diameter 8mm in dimension box > Stop Sketch
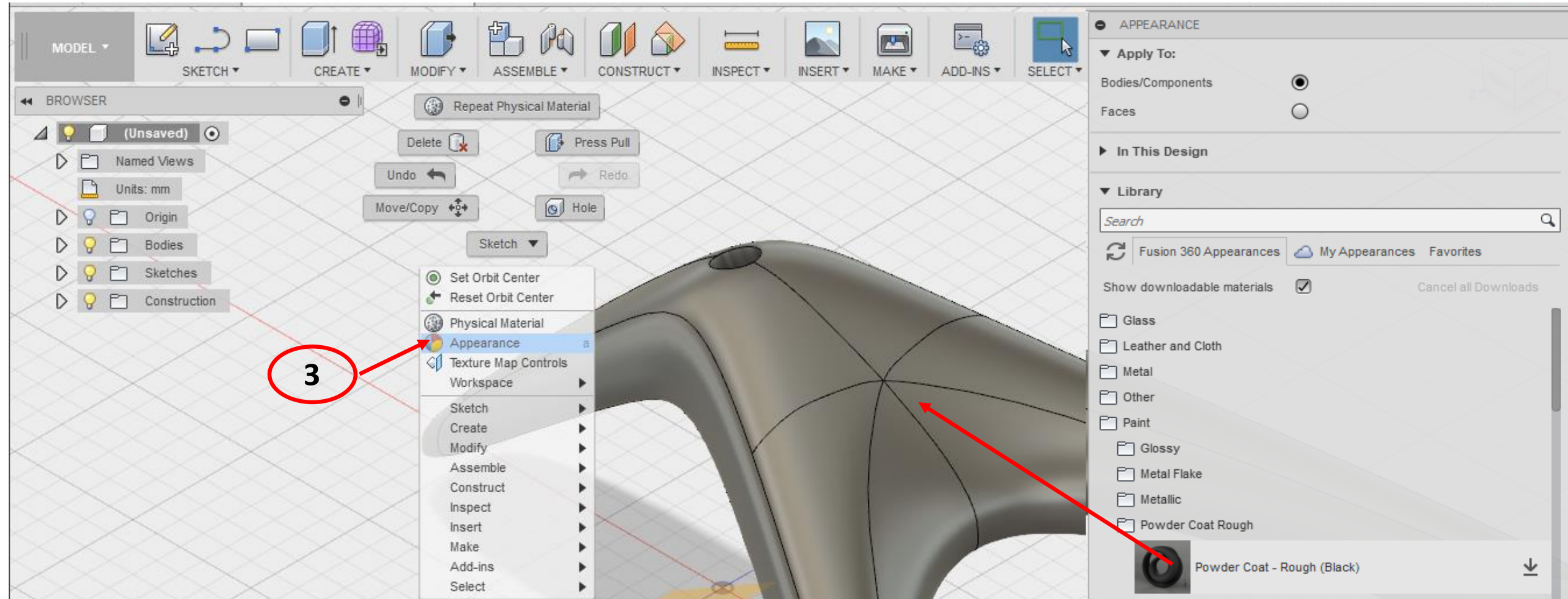
Step 3: Add a Hole

1. Select Create > Extrude

2. Select 8mm Circle as profile

3. Set extent to All

4. Set operation to Cut

1. Click Modify > Physical Material.
2. From the Metal folder, drag Aluminum onto the model.
3. Click Close.

1. Right-click in the graphics window. Click Appearance.
2. From the Paint > Powder Coat Rough folder, drag Powder Coat – Rough – (Black) onto the model.
3. Click Close.
4. In the browser, expand the Construction folder. Turn off the visibility of the angled plane.
5. Save the file.

Reflection

Were you engaged in this activity?

Did you find it inspiring?

What amendments would you make, if any?

How can you differentiate this task for the abilities of your students?

What were the main challenges for you when completing this task?

Can you see any issues that may arise when asking students to complete this task?