Fusion 360

Task 4

Objectives

- By the end of this session, you will:

- Know how to create the arm for the desktop lamp using the Sweep command.

- Be able to create a profile and a path to complete the task.

..\Fusion Training Videos\Task 4 - Model the Arm.mp4

Key Shortcuts

1. To rotate object: hold down mouse scroll wheel and move mouse

2. To zoom: scroll wheel forward/back

3. To Move object around screen: hold ctrl and hold down scroll wheel. Then simply move mouse.

4. Ctrl + Z will undo a step.

5. Pressing D will switch on dimension tool to allow dimensions be created.


SCROLL WHEEL

Step 1: Create a Hole in the Lampshade
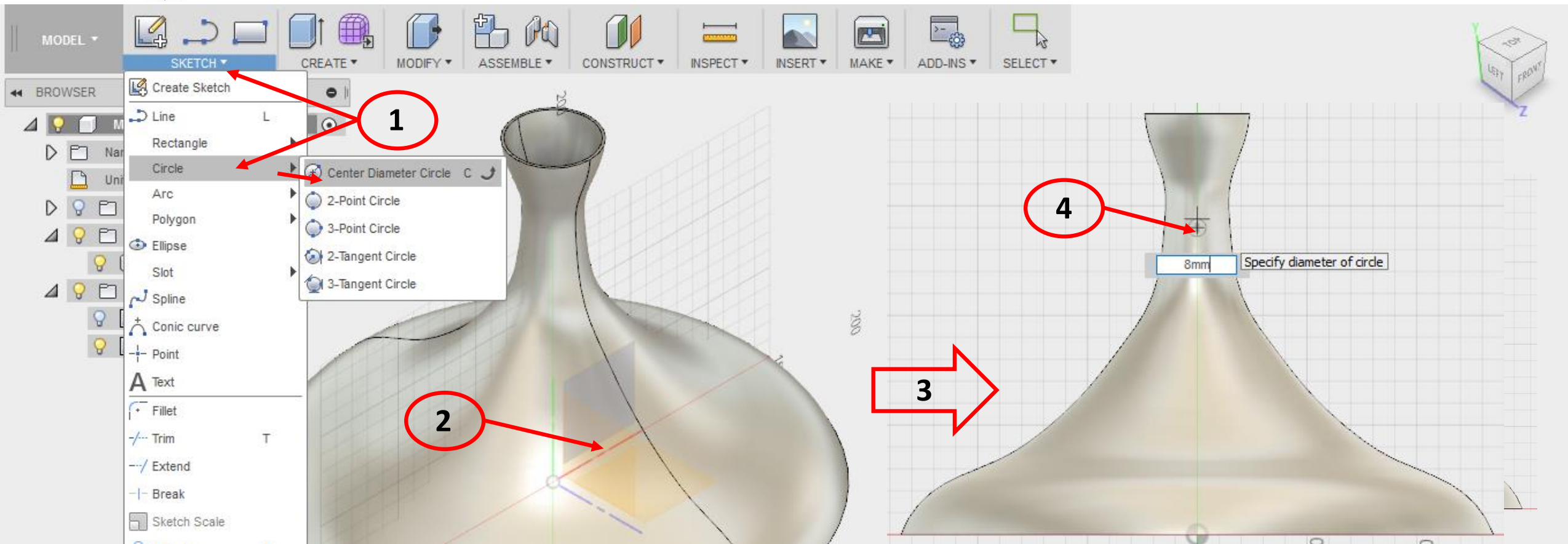
1. Select sketch > Circle > Center Diameter Circle

2. Now choose a plane to draw on. We choose a plane Perpendicular (90 °) to the base

3. The view will rotate to look straight at chosen plane.

4. Click on the center line about 1/3 down > drag out circle and enter 8mm diameter > press enter to confirm.
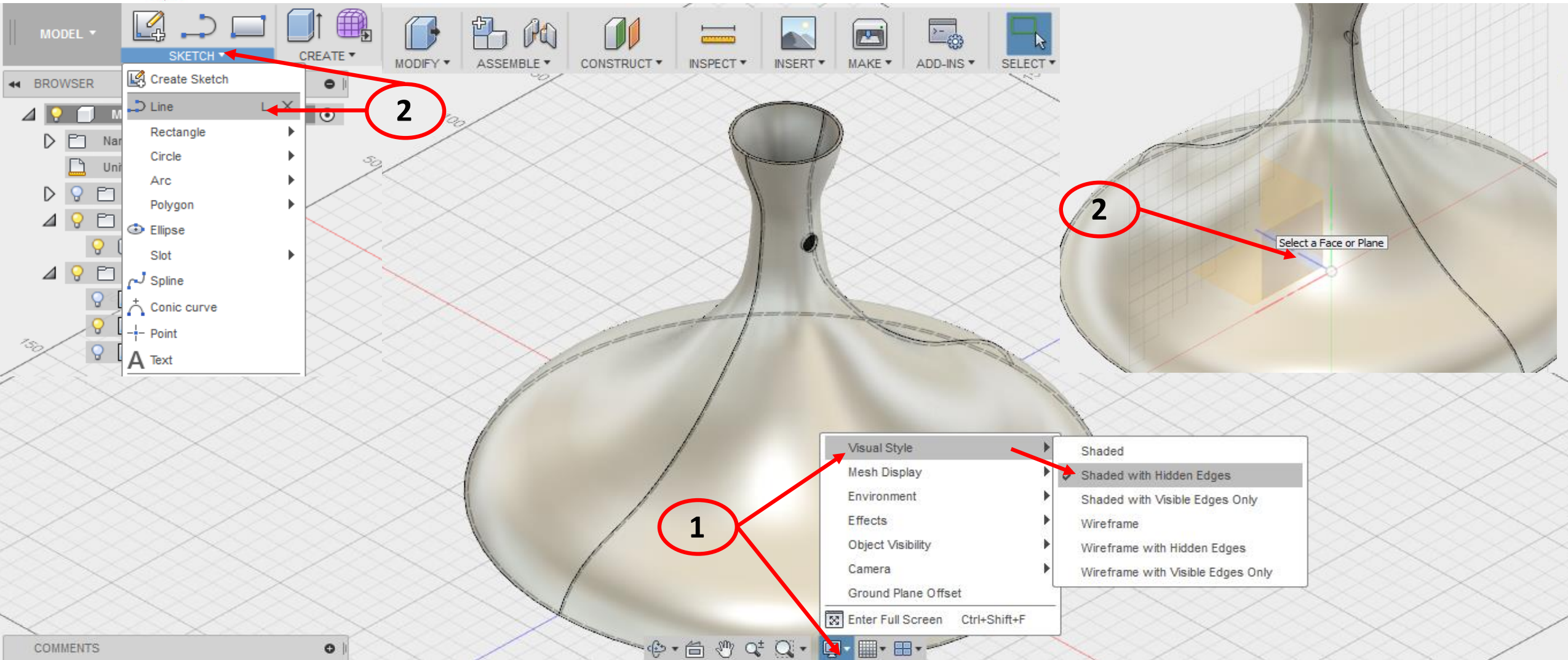
5. Stop Sketch

Step 1: Create a Hole in the Lampshade

You can rotate to see finished cut
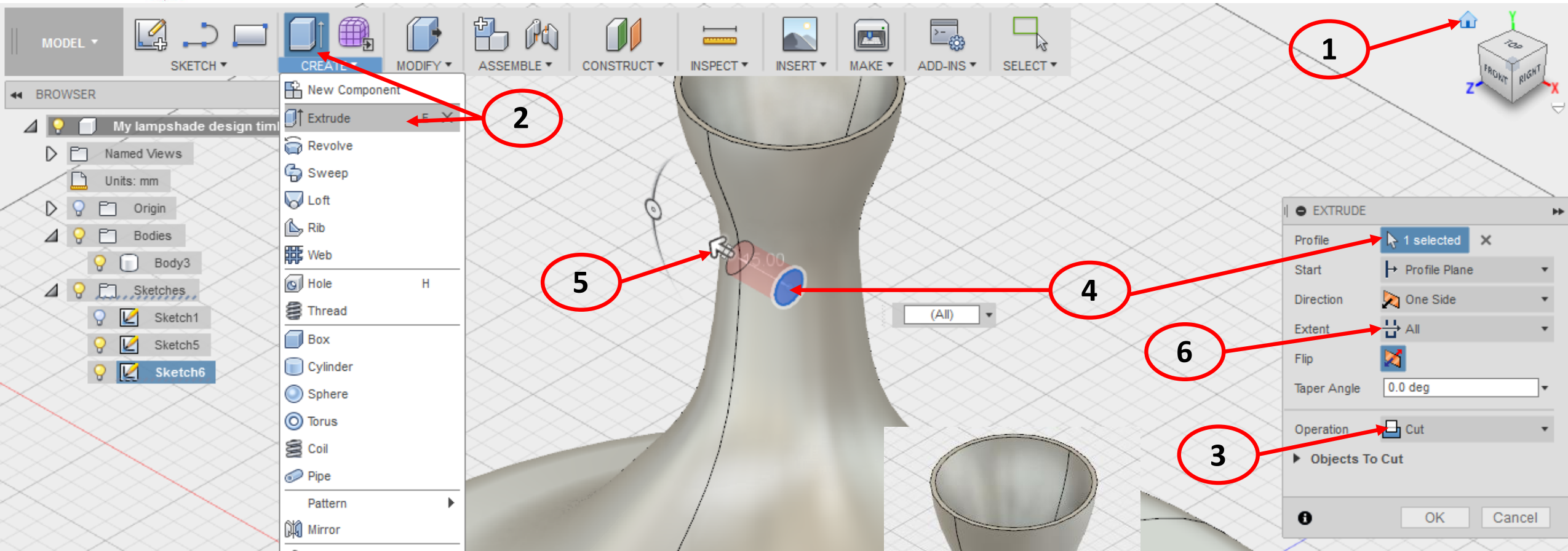
1. Move mouse over view cube > select home view.

2. Click create > Extrude.

3. Make operation Cut.

4. Select profile then select the full circle.

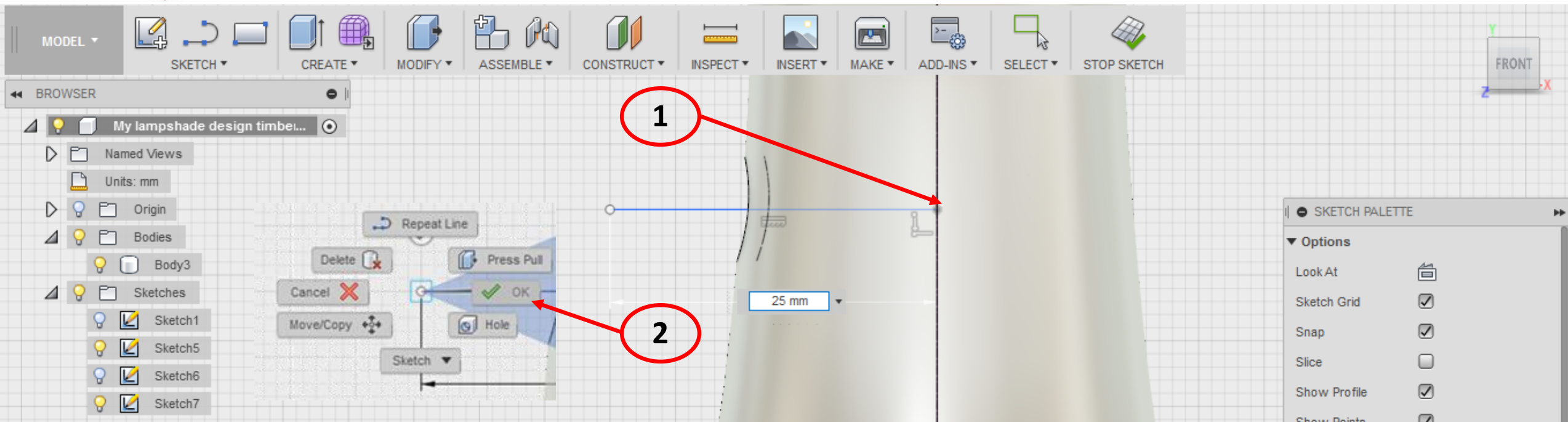5. Drag arrow in rear Direction if needed.

6. Set extent as All > click OK.

1. Select Display settings > Visual style > Shaded with hidden edges

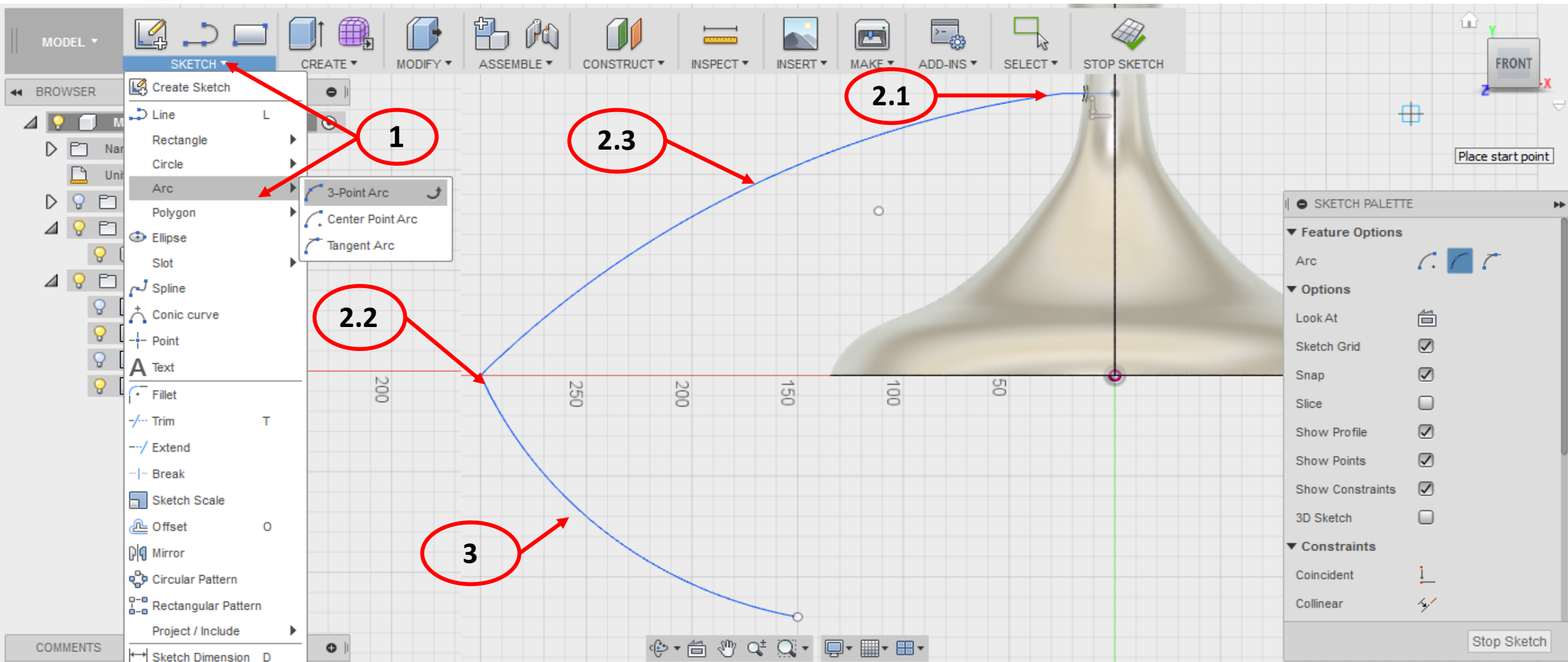2. Select Sketch > Line

3. Select Plane perpendicular to hole.

1. Click here to start line > Drag out > enter 25mm in dimension box > press enter > left click to end line.

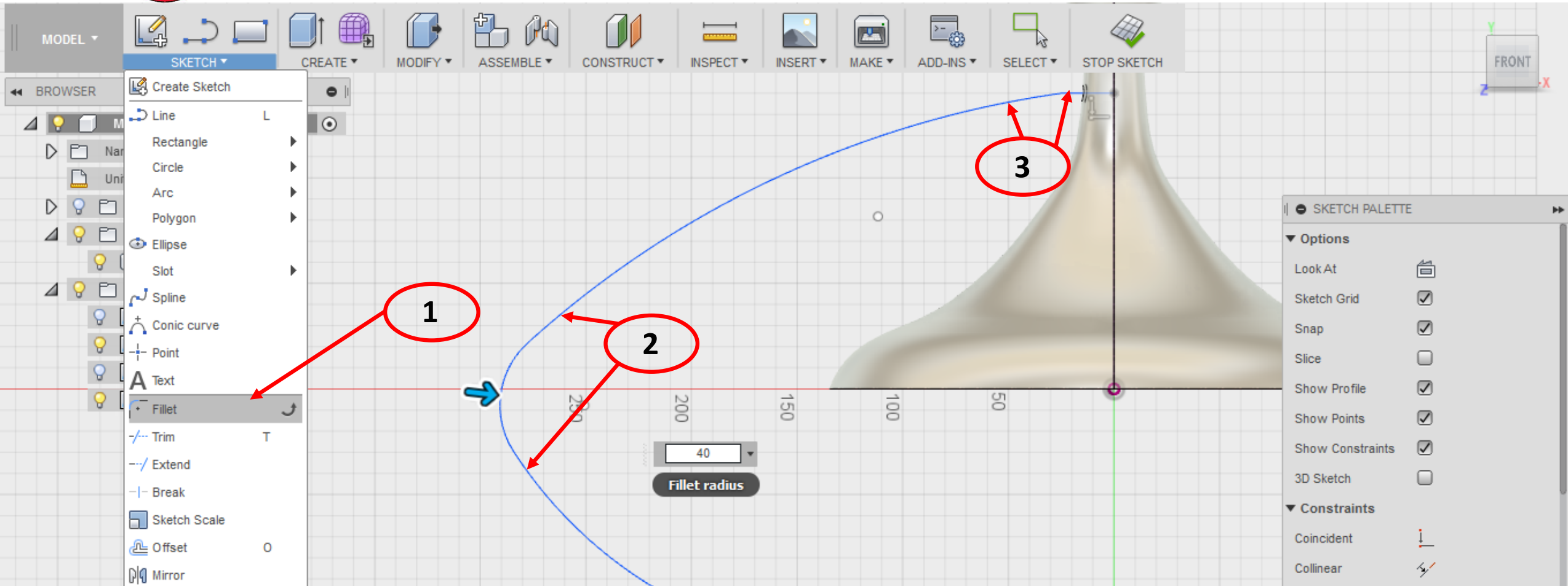2. To stop the line tool right click then select OK.

Step 4: Create Arm Path Sketch

1. Select Sketch > Arc > 3 point arc.

2. Select first point at 2.1, then drag to 2.2. Select the 3rd point at 2.3 to form arc.

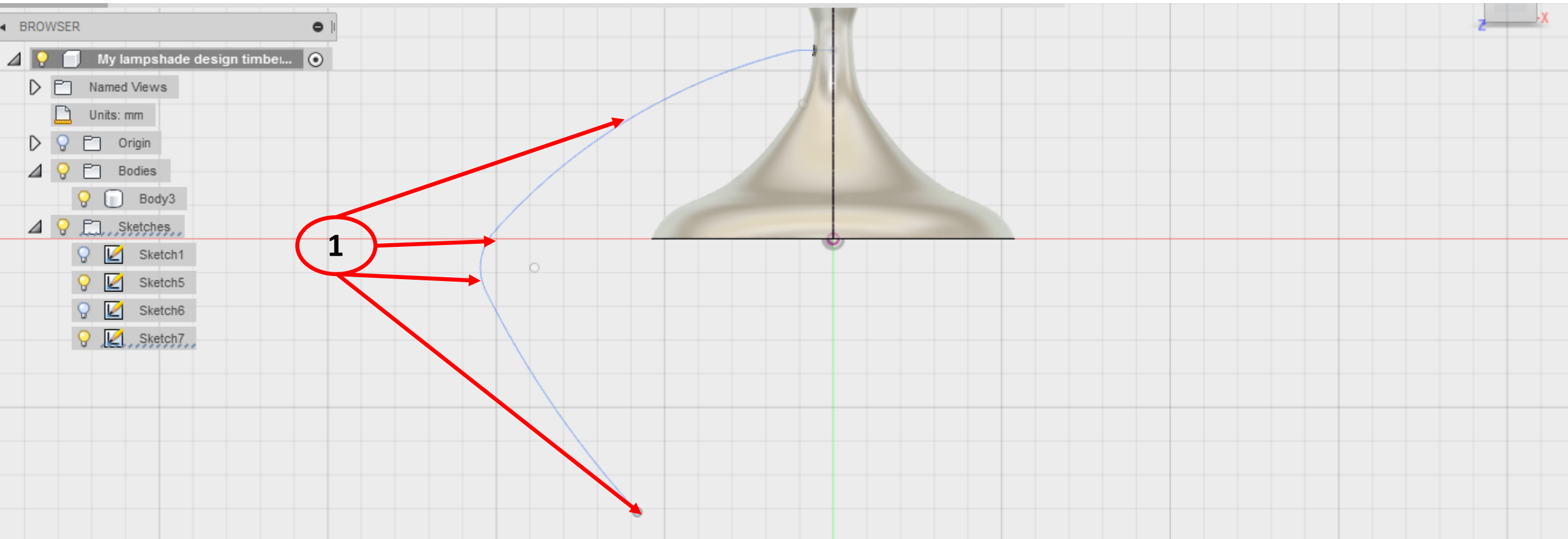3. Repeat another 3 point arc for bottom curve.

1. Select sketch > Fillet

2. Select Arc1 and Arc2 > enter 40mm as radius

3. Repeat between Arc1 and 25mm straight line.

4. Stop sketch

BROWSER
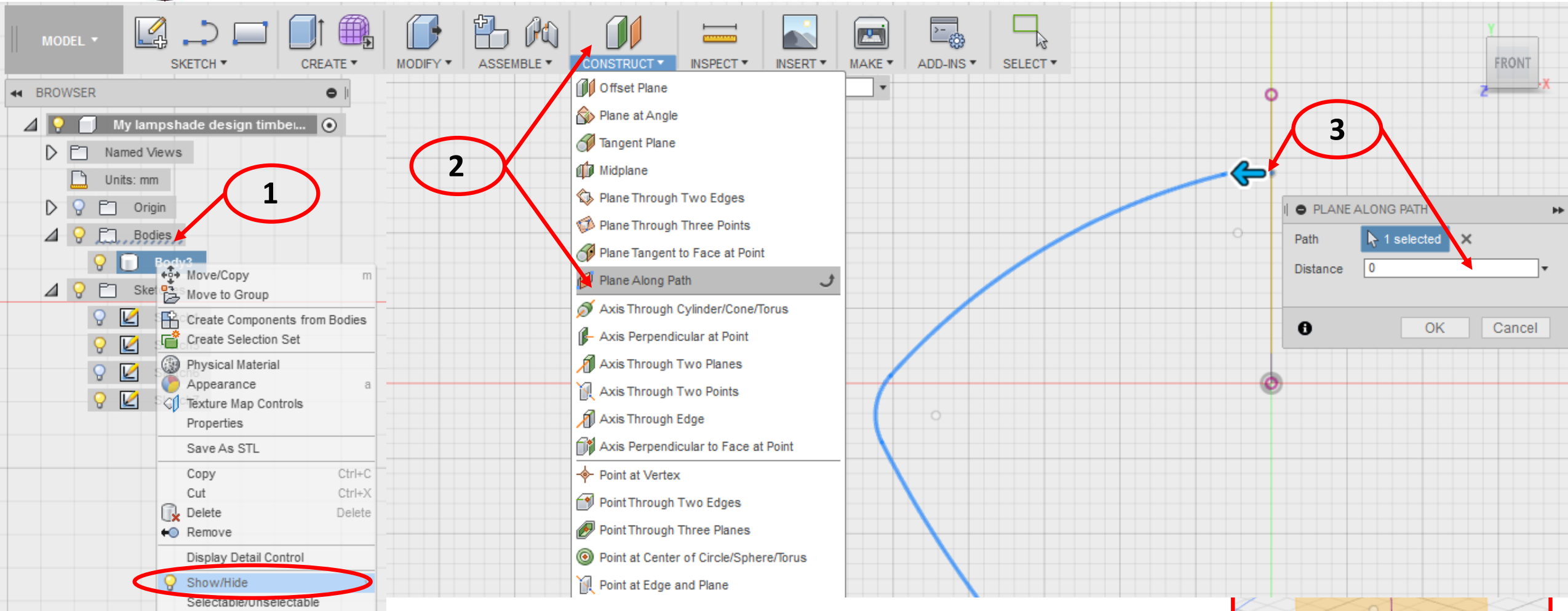
My lampshade design timber...

Named Views

Units: mm

Origin

Bodies

Body3

Sketches

Sketch1

Sketch5

Sketch6

Sketch7

1

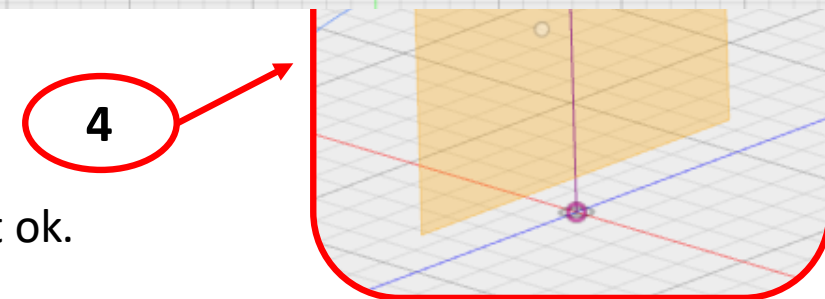1. You can now drag the points of arc to re shape curve similar to above.
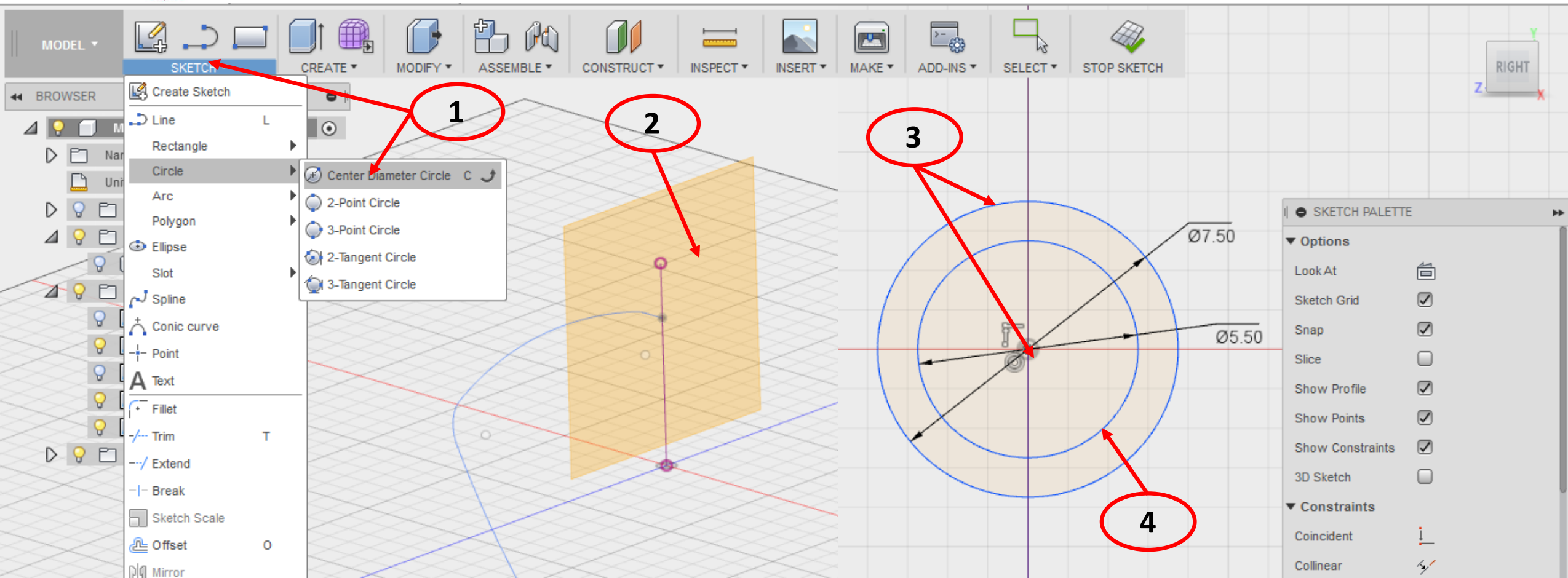
1. Click to expand bodies > right click body > Click show/hide to hide lamp body.

2. Now select construct > plane along path.

3. Select Path > Click the point at end of 25mm line > enter 0 in distance box > select ok.

4. Rotate to 3D view to see new plane created perpendicular to path of line.
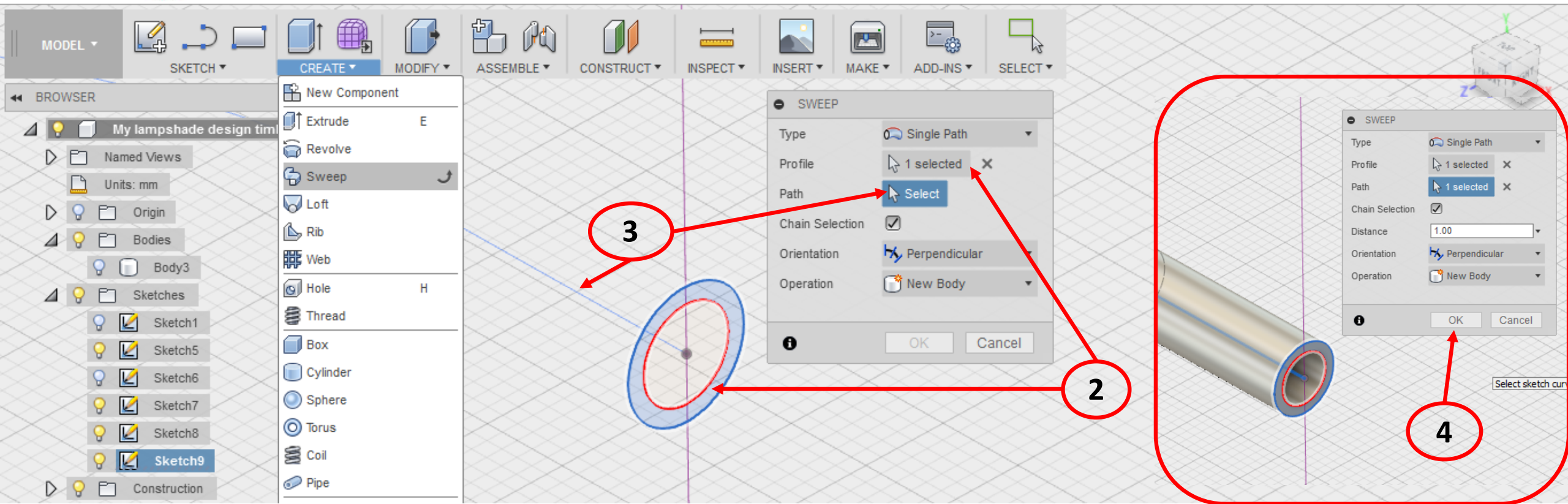
Step 6: Create sweep Profile

1. Select Sketch > circle > center diameter circle.

2. Now select our new plane.

3. Click and drag out circle from centre > dimension 7.5mm (zoom in for clarity)

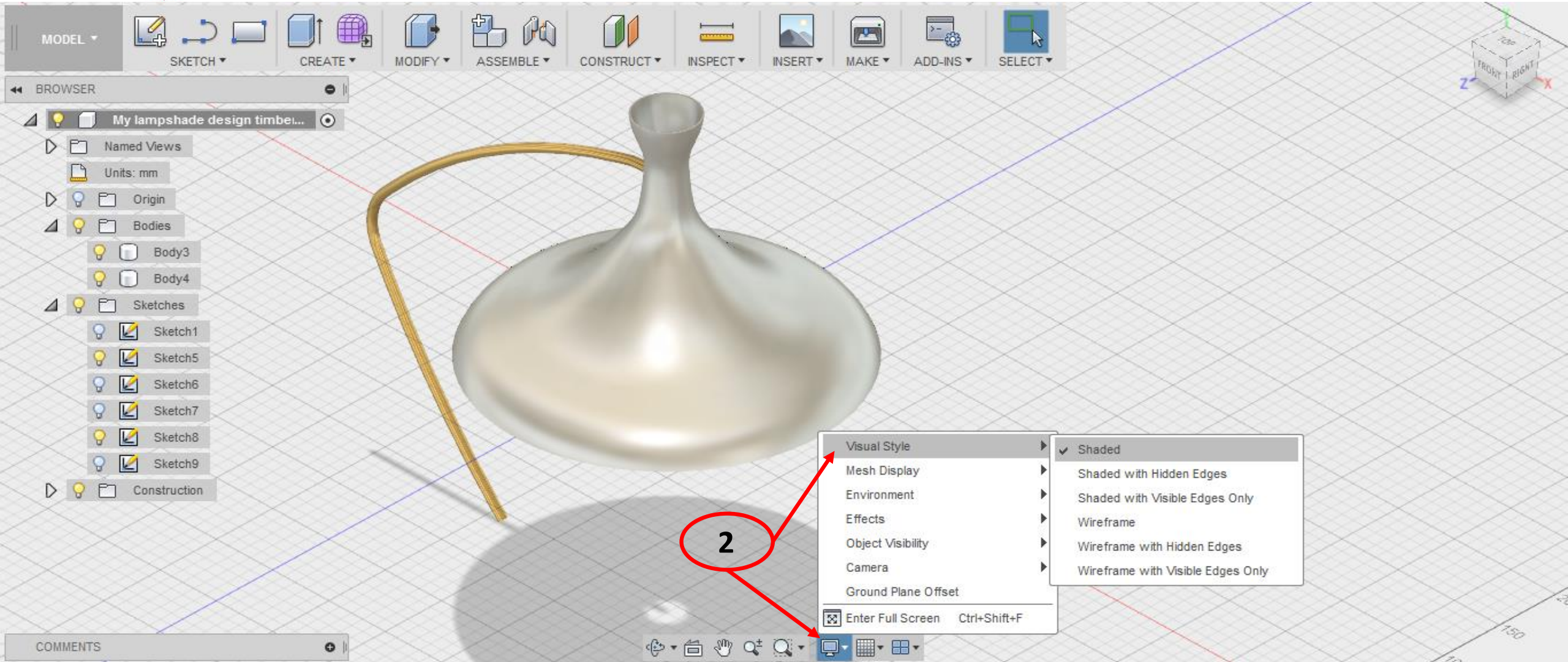4. Repeat another circle > dimension 5.5mm > Stop sketch.

1. Select Create > Sweep

2. In Dialogue box select profile > click the outer ring as shown.

3. Select Path > select the curved line as shown.

4. After both selected a preview will appear > then select OK.
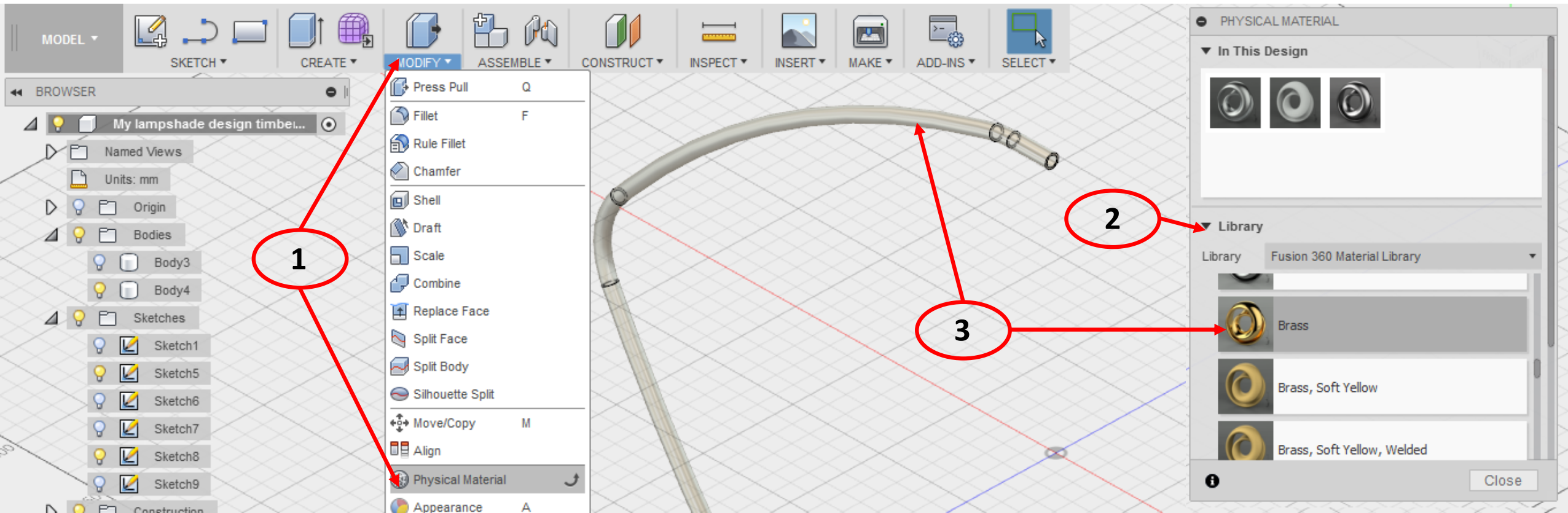
1. Select modify > Physical

2. In the dialogue box expand library > metal > scroll to brass

3. Drag brass onto the arm.

1. Select Display Settings > Visual Style > Shaded