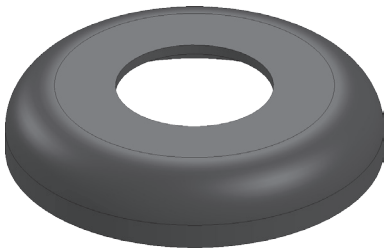
Skateboard
Top Cup Washer



A. Sketch.

Step 1. Click File Menu > New, click **Part Metric** and OK.

Step 2. Click **Front Plane** in the Feature Manager and click **Sketch** from the Context toolbar, **Fig. 1**.

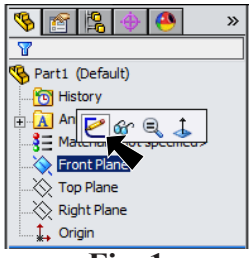


Fig. 1

Step 3. Click **Corner Rectangle** **(S)** on the Sketch toolbar.

Step 4. Draw a rectangle starting at Origin , **Fig. 2**.

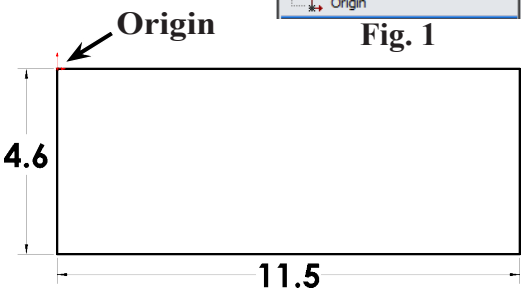


Fig. 2

Step 5. Click **Smart Dimension** **(S)** on the Sketch toolbar.

Step 6. Add dimensions, **Fig. 2**.

Step 7. Click Zoom to Fit **(F)** on the View toolbar.

Step 8. Click **Sketch Fillet** **(S)** on the Sketch toolbar.

Fig. 4

Step 9. In the Sketch Fillet Property Manager set:
under Fillet Parameters, **Fig. 3**
Radius **3**
click **top right corner** of rectangle, **Fig. 4**
click **twice** OK .

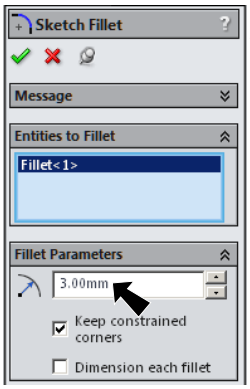


Fig. 3

Step 10. Click **Features** on the Command Manager toolbar.

Step 11. Click **Revolved Boss/Base** on the Features toolbar.

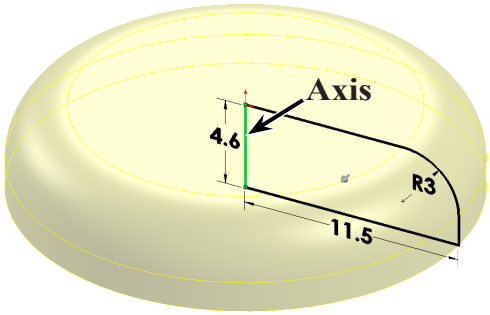


Fig. 6

Step 12. In the Revolve Property Manger:
under Axis of Revolution
click **left vertical line**, **Fig. 6**
click OK .

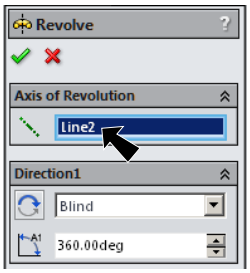


Fig. 5

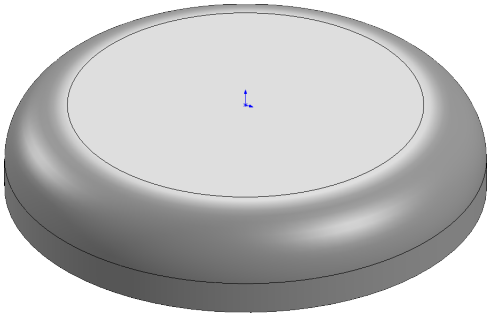


Fig. 7

B. Save as "TOP CUP WASHER".

Step 1. Click File Menu > Save As.

Step 2. Key-in **TOP CUP WASHER** for the filename and press ENTER.

C. Shell.

Step 1. Rotate view to view **bottom face**, **Fig. 8**. Hold down middle mouse button (wheel) and drag to rotate view.

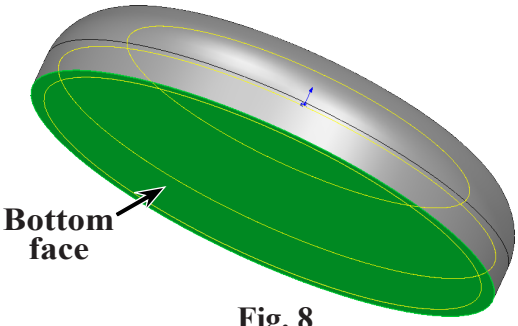


Fig. 8

Step 2. Click **Shell** 

on the Features toolbar.

Step 3. In the Shell Property Manager set:
under Parameters, **Fig. 9**

Distance  **.65**
check **Show preview**
in the face to remove box
click **bottom face**, **Fig. 8**
click OK  .

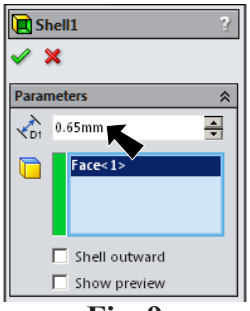


Fig. 9

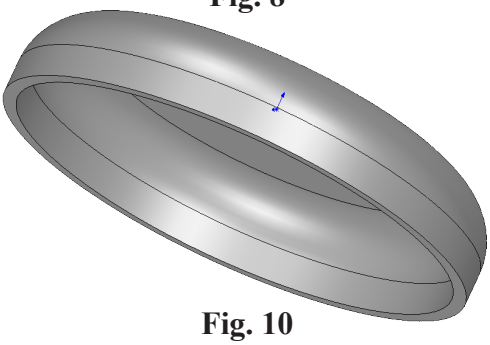


Fig. 10

Step 4. Save. Use **Ctrl-S**.

D. Extrude Cut Hole.

Step 1. Click **Trimetric**  on the Standard Views toolbar.

Step 2. Click the **top flat face** of washer and click **Sketch**  on the Context toolbar, **Fig. 11**.

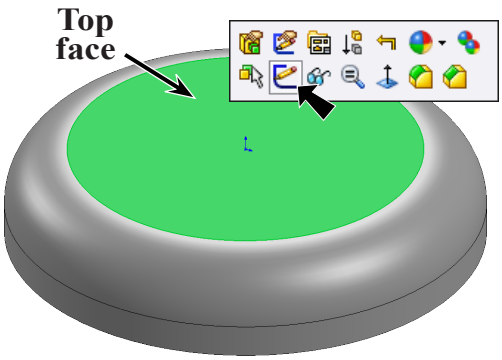
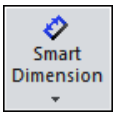


Fig. 11

Step 3. Click **Circle**  **(S)** on the Sketch toolbar.

Step 4. Draw a circle starting at the Origin  , **Fig. 12**.

Step 5. Click **Smart Dimension** 

(S) on the Sketch toolbar.

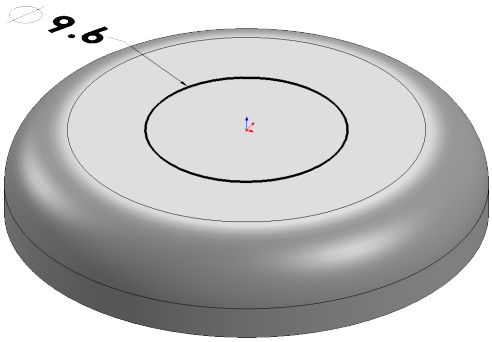


Fig. 12

Step 6. Dimension **diameter 9.6**, **Fig. 12**.

Step 7. Click **Features** Features on the Command Manager toolbar.

Step 8. Click **Extruded Cut** Extruded Cut on the Features toolbar.

Step 9. In the Property Manager set:
under Direction 1, **Fig. 13**
End Condition
Through All
click OK ✔.

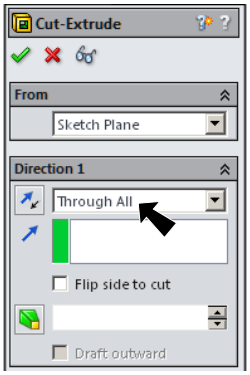


Fig. 13

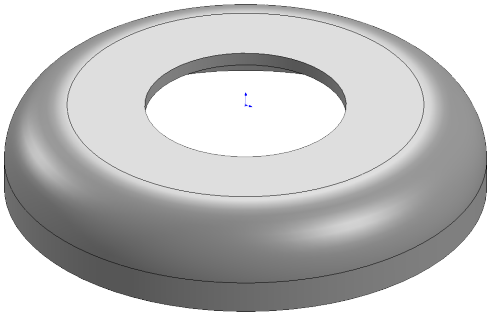


Fig. 14

E. Appearance.

Step 1. Click the part and click **Appearance Callout** on the Context toolbar, then click **TOP CUP...**, **Fig. 15**.

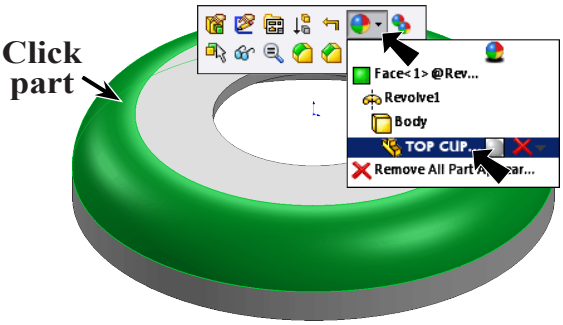


Fig. 15

Step 2. In the Appearances Task pane, expand **Metal** and click **Steel.** In lower pane select **polished steel**, **Fig. 16**.

Step 3. In the Appearances Property Manager set:
under Color, **Fig. 17**
click **gray swatch above black**
and OK ✔.

Step 4. Save. Use **Ctrl-S**.

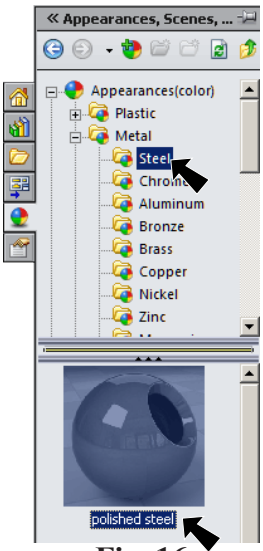


Fig. 16

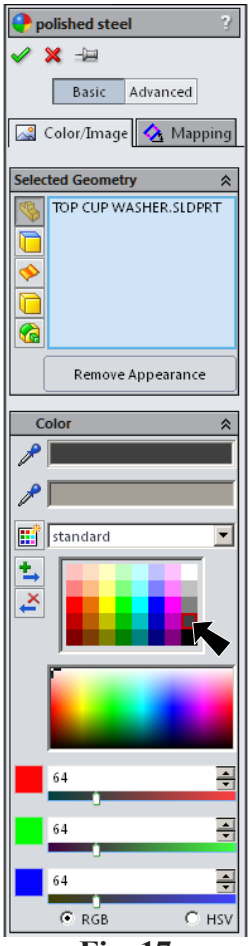


Fig. 17

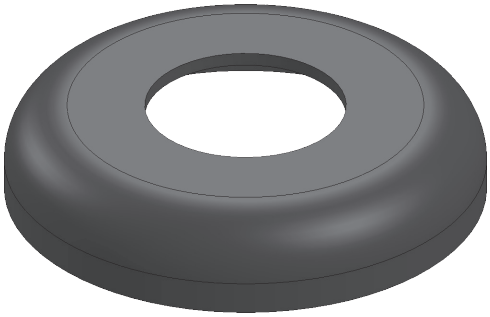


Fig. 18