



A. Wheel Sketch.

Step 1. Click File Menu > New.

Step 2. Click **Part** from the list and click OK.

Step 3. Click **Right Plane**  in the Feature Manager and click **Sketch**  from the Content toolbar, **Fig. 1**.

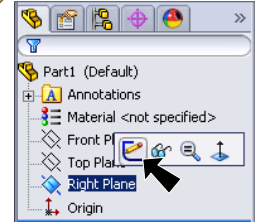


Fig. 1

Step 4. Click **Circle**  on the Sketch toolbar.

Step 5. Draw **two circles** starting at the Origin , **Fig. 2**.

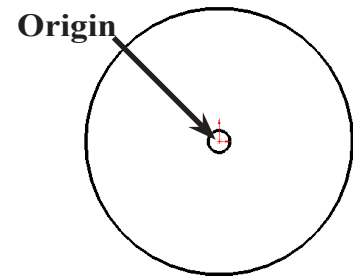


Fig. 2

Step 6. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 7. Dimension the circles as shown in **Fig. 3**.

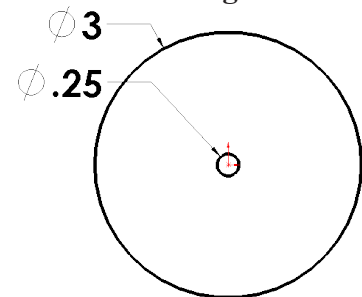
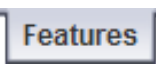




Fig. 3

Step 8. Click **Features**  on the Command Manager toolbar.

Step 9. Click **Extruded Boss/Base**  on the Features toolbar.

Step 10. In the Property Manager set: under Direction 1, **Fig. 4**

Depth  D1 1
click OK , **Fig. 5**.

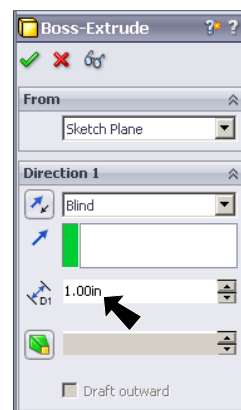


Fig. 4

Step 11. Click **Zoom to Fit**  (F) on the View toolbar.

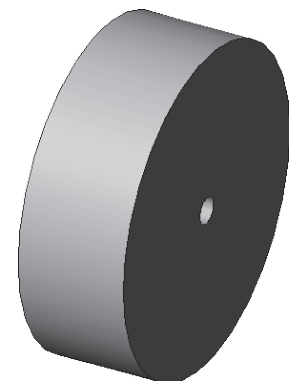




Fig. 5

B. Save as "WHEEL".

Step 1. Click File Menu > Save As.

Step 2. Key-in **WHEEL** for the filename and press ENTER.

C. Sketch Groove.

Step 1. Click **Front Plane**  in the Feature Manager and click **Sketch**  from the Content toolbar, **Fig. 6**.

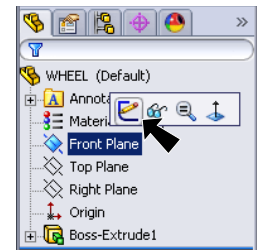


Fig. 6

Step 2. Click **Normal To**  on the Views toolbar. (**Ctrl-8**)

Step 3. Click **Rectangle**  on the Sketch toolbar.

Step 4. Draw a rectangle along the top edge of the wheel close to the fillet. Move cursor to the top edge of wheel, when the **edge turns red start the rectangle**. Keep rectangle away from the corner of wheel, **Fig. 7**.



Fig. 7

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

Step 6. Add the dimensions as shown in **Fig. 8**.

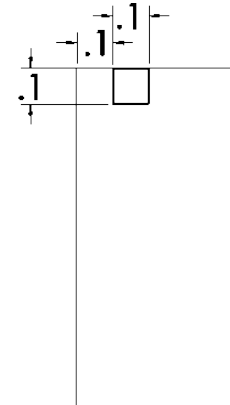


Fig. 8

If you need help Smart dimensioning try this:

1st dimension, click the left side of the rectangle, **Fig. 9**. Place the dimension left of the wheel. (Key-in **.1** for all 3 dimensions)

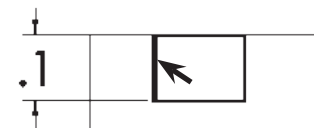


Fig. 9

2nd dimension, click the left side of the wheel and the left side of the rectangle, **Fig. 10**. Place the dimension the above the wheel.

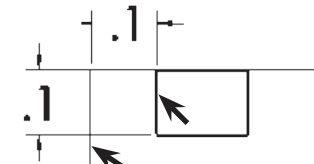


Fig. 10

3rd dimension, click the top line of the rectangle, **Fig. 11**. Place the dimension above of the wheel.

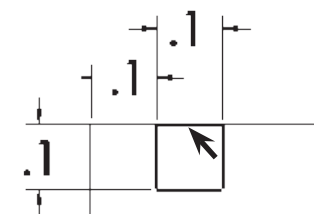


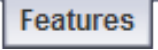


Fig. 11

D. Centerline.

Step 1. Click **Centerline**  in the **Line flyout**  on the Sketch toolbar.

Step 2. Starting from the Origin , draw a centerline through the center of the wheel, **Fig. 12**.

Step 3. Click **Features**  on the Command Manager toolbar.

Step 4. Click **Revolved Cut**  on the Features toolbar.

Step 5. In the Cut-Revolve Property Manager click **OK** .

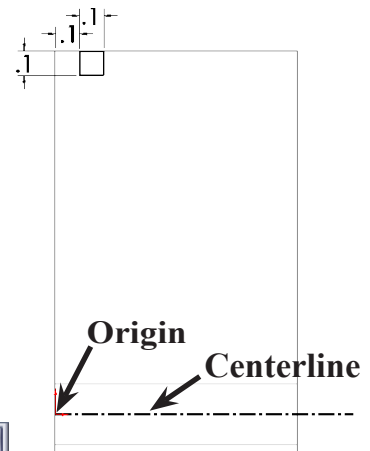


Fig. 12

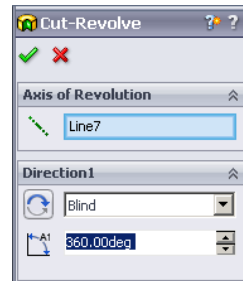


Fig. 13

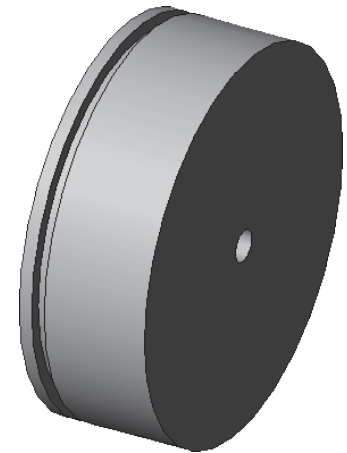


Fig. 14

E. Fillet.

Step 1. Click **Isometric**  on the View toolbar. (Ctrl-7)

Step 2. Click **Fillet**  on the Features toolbar.

Step 3. In the Fillet Property Manager set:

Radius  **.05**
click **OK** , **Fig. 16**.

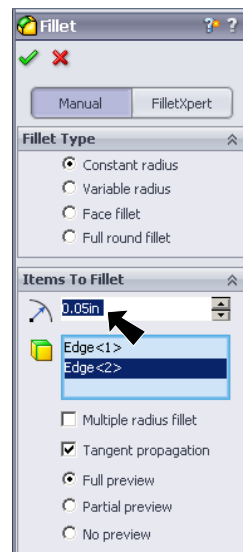


Fig. 15

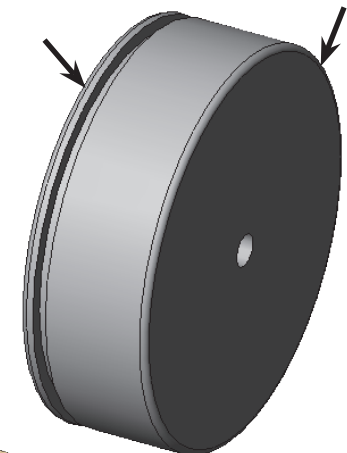


Fig. 16

F. Material Pine.

Step 1. **Right click** **Material**  in the Feature Manager and click **Edit Material**.

Step 2. **Expand Woods** in the material tree and click **Pine**. Click **Apply** and **Close**.

Step 3. Save. Use **Ctrl-S**.

