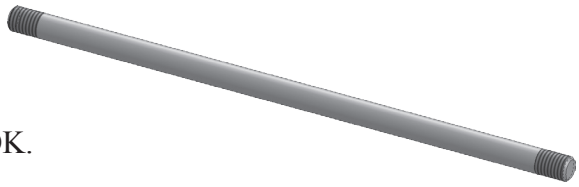
Skateboard
Axle



A. Axle.

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

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

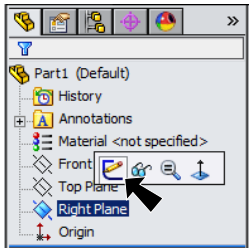


Fig. 1

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

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

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

Step 6. Dimension **circle diameter 8**, **Fig. 2**.

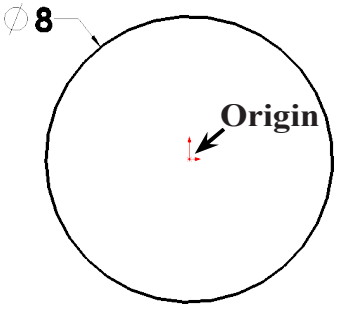


Fig. 2

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

Step 8. Click **Extruded Boss/Base** on the Features toolbar.

Step 9. In the Property Manager set:
under Direction 1, **Fig. 3**
End Condition **Mid Plane**
Depth **192**
click OK .

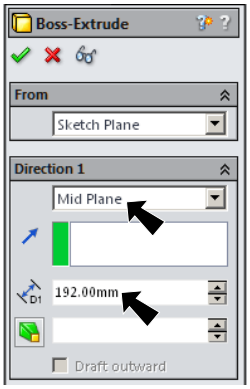


Fig. 3

Step 10. Click Zoom to Fit **(F)** on the View toolbar.

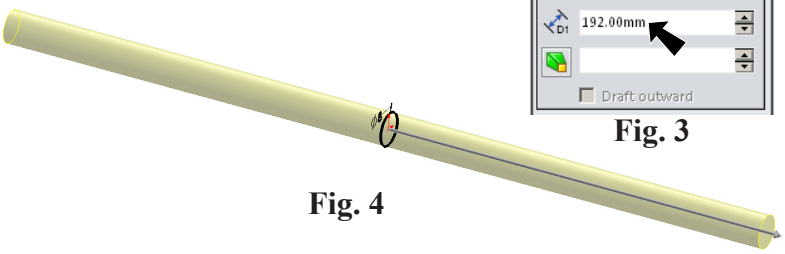


Fig. 4

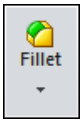
B. Save as "AXLE".

Step 1. Click File Menu > Save As.

Step 2. Key-in **AXLE** for the file-name and press ENTER.

C. Chamfers.

Step 1. Click **Chamfer** 

in the **Fillet flyout** 

on the Features toolbar.

Step 2. In the Chamfer Property Manager set:
under Chamfer Parameters, **Fig. 5**

Depth **.81**

Angle **45º**

select **Full preview**

click **circular edges at both ends** of axle, **Fig. 6**

click OK .

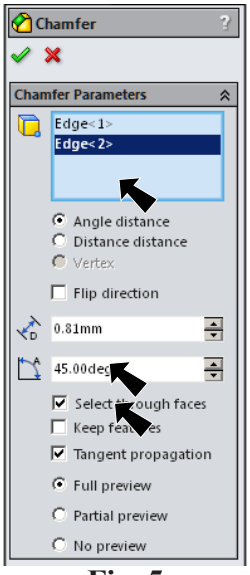


Fig. 5

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

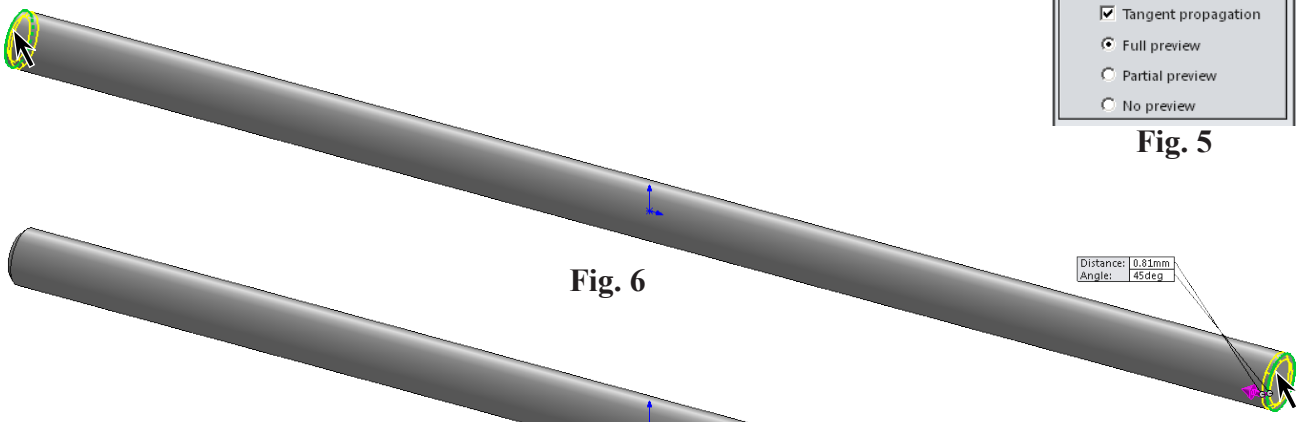


Fig. 6

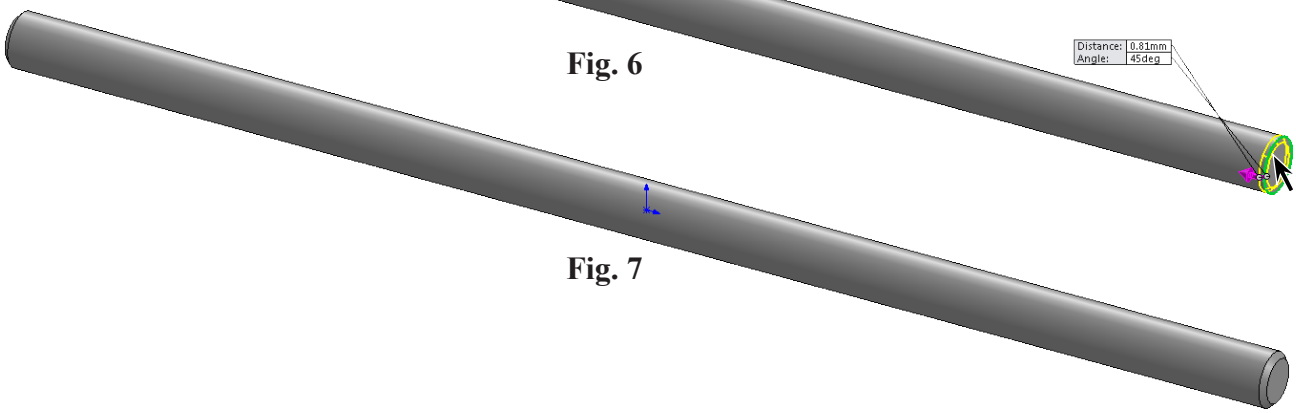


Fig. 7

D. Cosmetic Threads.

Step 1. Click Insert Menu > Annotations > Cosmetic Thread.

Step 2. In the Cosmetic Thread Property Manager set:
under Thread Setting, **Fig. 8**
click **chamfer circular edge** at one end of axle, **Fig. 8**
under Start from a face/plane
click **end face**
under Standard:
ANSI Metric
under Size:
M8x1.0
End Condition **Blind**
Depth D **10**
click OK .

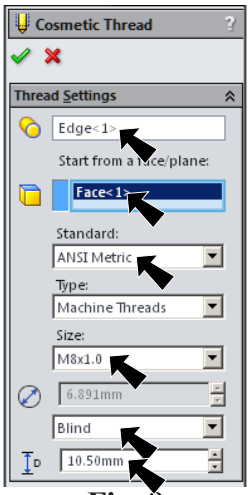


Fig. 8

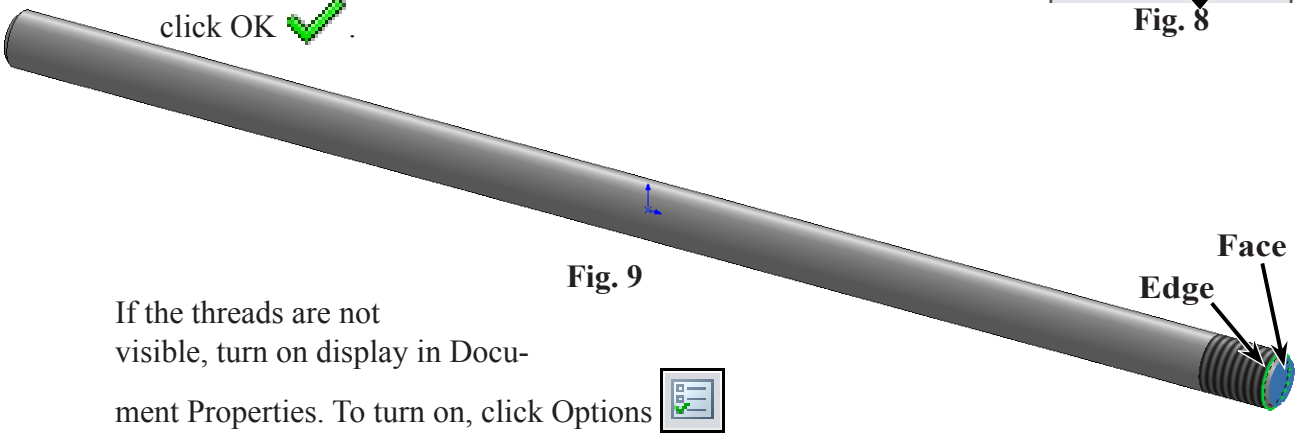


Fig. 9

If the threads are not visible, turn on display in Document Properties. To turn on, click Options on the Standard toolbar or Tools Menu > Options. Click Document Properties tab and under **Detailing**, check **Cosmetic threads** and check **Shaded cosmetic threads**.

Step 3. Rotate Axle and repeat Step 2 for other end, **Fig. 10**.

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

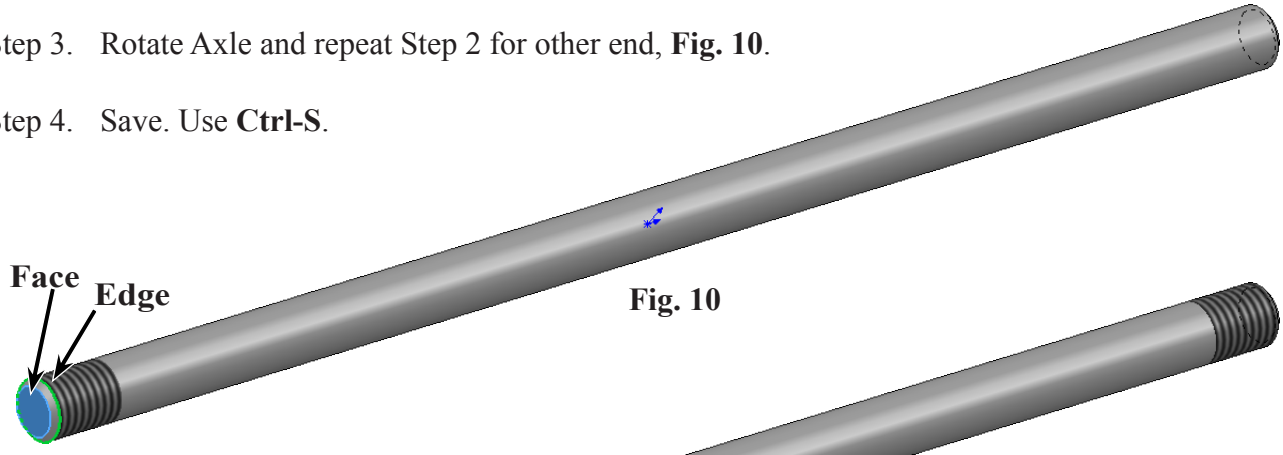


Fig. 10

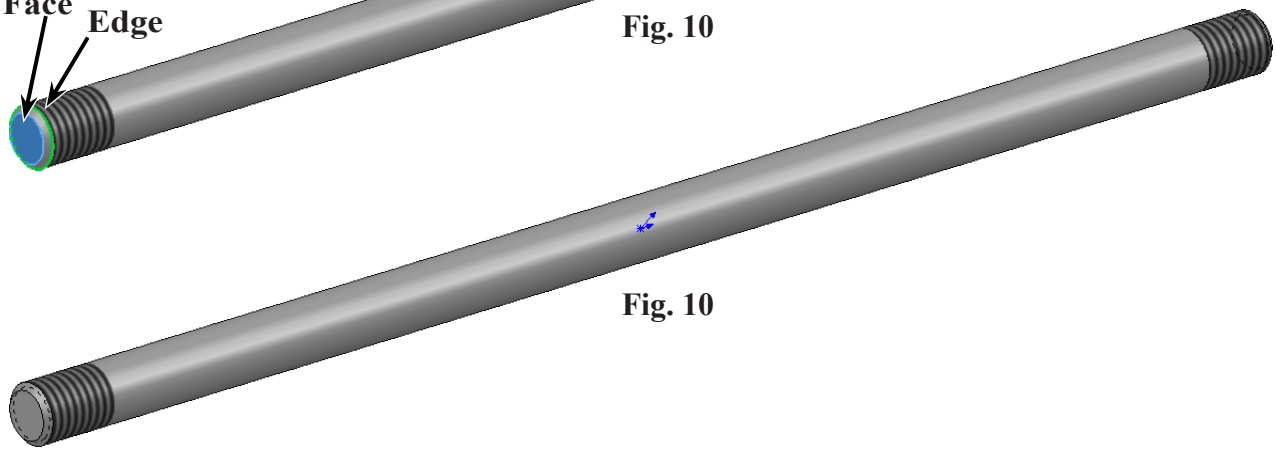


Fig. 10