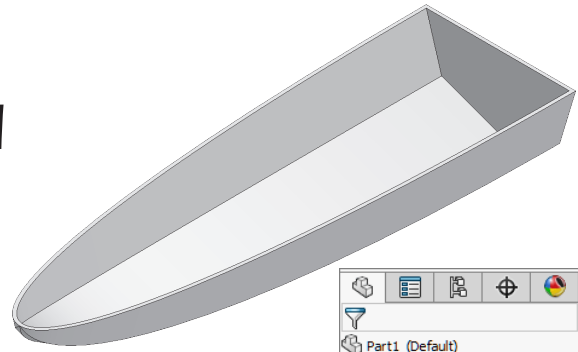




Boat Hull



A. Sketch.

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

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

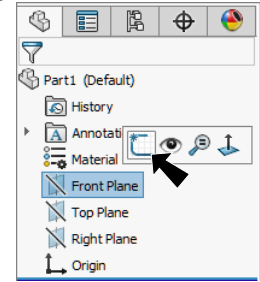


Fig. 1

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



Step 4. Sketch point directly above the Origin , **Fig. 2**. Use the inferencing line, the dotted line that appears when you sketch the point.




Fig. 2

Step 5. Click **Centerline**  in the **Line flyout**  on the Sketch toolbar.

Step 6. Starting from the Origin , sketch a centerline up to the point, **Fig. 3**.

Step 7. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 8. Dimension line **1.4**, **Fig. 4**.

Step 9. Click **Exit Sketch**  on the Sketch toolbar.

B. Save as "HULL".

Step 1. Click File Menu > Save As.

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

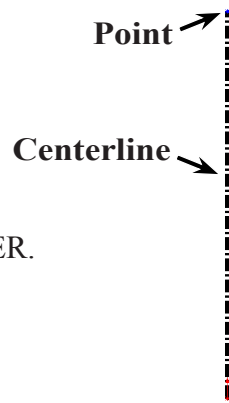


Fig. 3

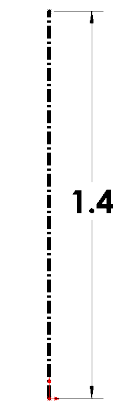




Fig. 4

C. Create Plane.

- Step 1. Click **Isometric**  on the Standard Views toolbar. (**Ctrl-7**)
- Step 2. Click **Front Plane**  in the Feature Manager, **Fig. 5**.
- Step 3. **Ctrl drag** edge of Front plane in graphics area towards right side of sketch and release, **Fig. 6**. To Ctrl drag, hold down Ctrl and drag plane to right.

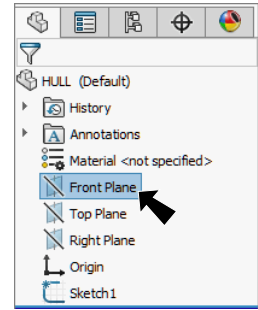


Fig. 5

- Step 4. In the Plane Property Manager set:
under First Reference, **Fig. 7**
Front Plane was preselected

Distance  **9**
and press **ENTER**.

Click in the graphics area and press F key, Zoom to Fit  (**F**).
check **Flip offset**

The new plane should be positioned to right, **Fig. 6**. If in wrong direction use Flip offset, **Fig. 7**.

Click OK .

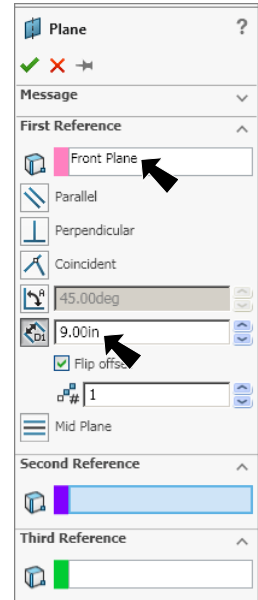


Fig. 7

Drag in this direction
set distance to 9

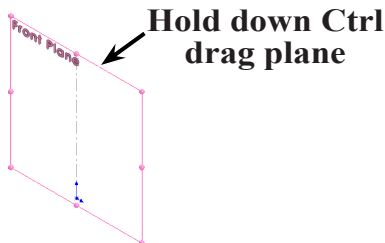
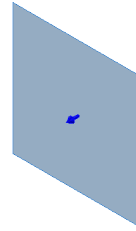


Fig. 6

D. Rename Plane1 Rear Plane.

- Step 1. **Rename Plane1** to **Back Plane** in the Feature Manager, **Fig. 8**. To rename, click **Plane1** name in Feature Manager and press **F2** on keyboard. Key-in **Rear Plane**.

- Step 2. Save. Use **Ctrl-S**.

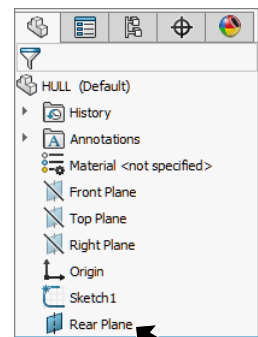


Fig. 8

E. Copy Sketch to Rear Plane.

Step 1. Click **Sketch1** in the Feature Manager, **Fig. 9** and copy. Use **Ctrl-C** to copy sketch.

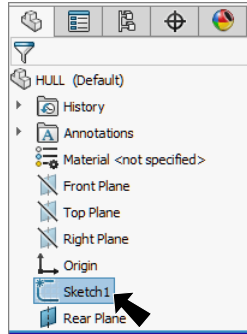


Fig. 9

Step 2. Click **Rear Plane** in the Feature Manager, **Fig. 10** and paste sketch. Use **Ctrl-V** to paste sketch, **Fig. 11** and **Fig. 12**.

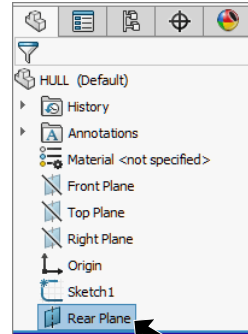


Fig. 10

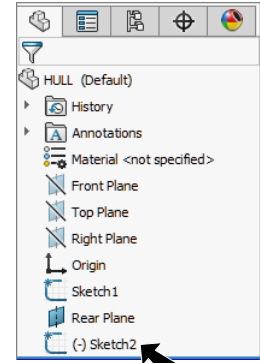
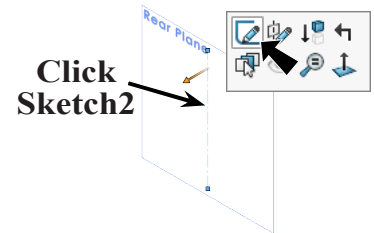


Fig. 11

F. Edit Sketch2.

Step 1. Click **Sketch2** (pasted sketch) in the graphics area and click **Edit Sketch** on the context toolbar, **Fig. 12**.



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

Step 3. Grab the bottom endpoint of centerline and pull off the Origin

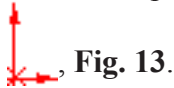


Fig. 13.

Step 4. **Ctrl click bottom endpoint of centerline** and **Origin** to select both. Release **Ctrl** key and click **Make Coincident** on the context toolbar, **Fig. 14**.

Fig. 12

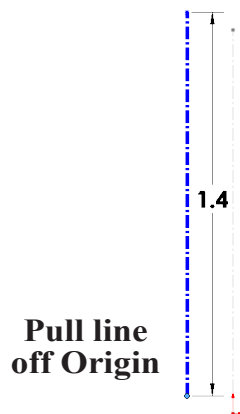


Fig. 13

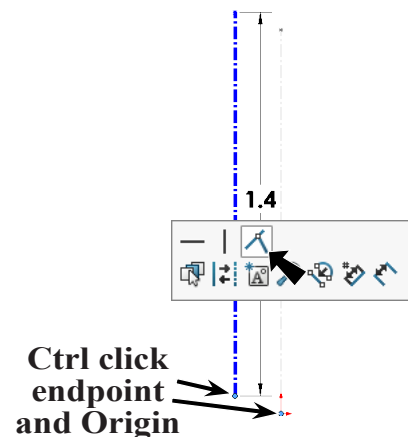


Fig. 14

Step 5. Click **Line**  (L) on the Sketch toolbar.

Step 6. Starting at the Origin  sketch the 3 lines, **Fig. 15**.

Step 7. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 8. Add dimensions, **Fig. 16**. Dimension **double distance the 2.8**. To double distance dimension, click centerline and then left endpoint of horizontal line, move the cursor above horizontal line and click. Key-in 2.8 in the Modify box and press ENTER.

Step 9. **Right click graphics area and click Select** from menu to unselect Smart Dimension.

Step 10. **Drag selection around the sketch** to select all entities, **Fig. 17**. To drag selection, click above and to left of sketch and drag down and to right to select all.

Step 11. Click **Mirror Entities**  **Mirror Entities** on the Sketch toolbar, **Fig. 18**.

Step 12. Click **Exit Sketch**  on the Sketch toolbar.

Step 13. Save. Use **Ctrl-S**.

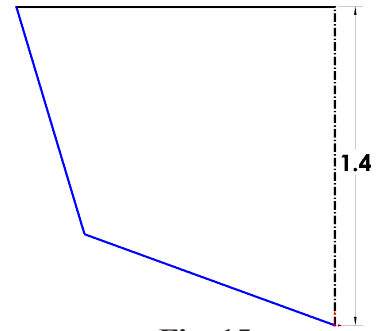


Fig. 15

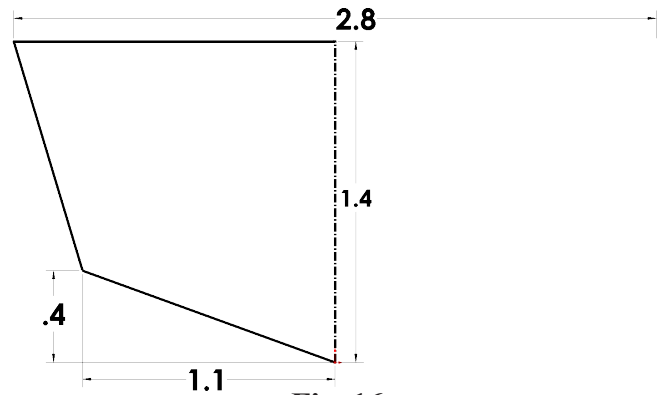


Fig. 16

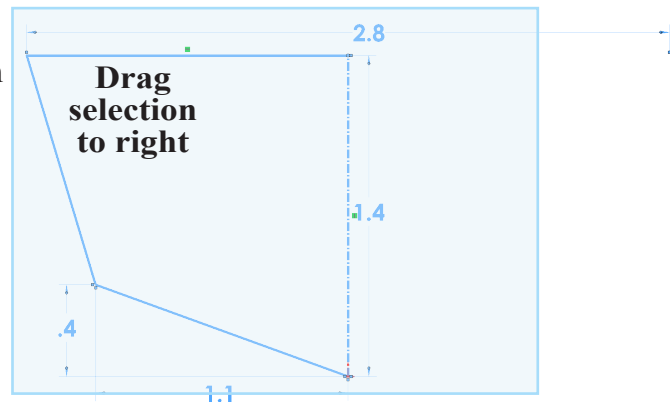


Fig. 17

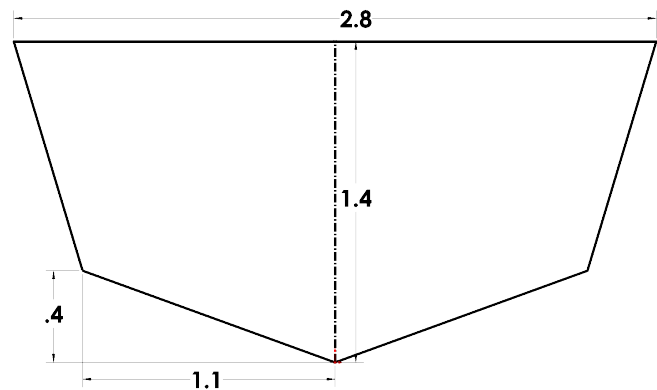



Fig. 18

G. Hide Rear Plane.

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

Step 2. Click **Rear Plane** in the Feature Manager and click **Hide**  on context toolbar, **Fig. 19**.

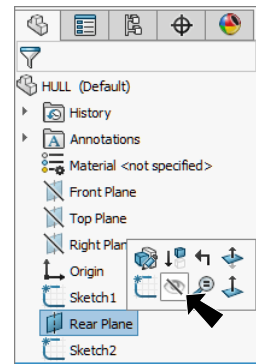


Fig. 19

H. Loft.

Step 1. Click **Features**  on the Command Manager toolbar.

Step 2. Click **Lofted Boss/Base**  on the Features toolbar.

Step 3. In the Loft Property Manager set:
 under Profiles, **Fig. 20**
 click **Point 1** in Sketch1, **Fig. 21**
 click **Position 1** on the top line in Sketch2

expand **Start/End Constraints**

under Start/End Constraints:

Start constraint:

Normal to Profile

Start Tangent Length: 1.9

End constraint:

Normal to Profile

End Tangent

Length: 1.7

click OK .

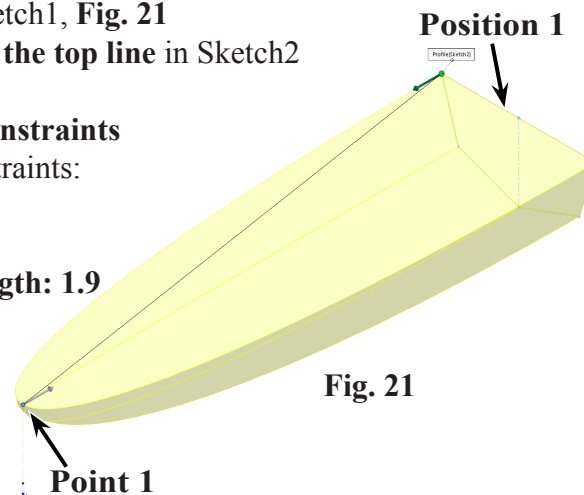


Fig. 21

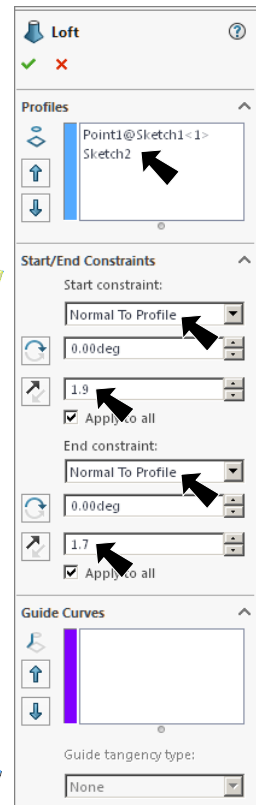



Fig. 20

I. Shell.

Step 1. Click **Shell**  on the Features toolbar.

Step 2. In the Shell Property Manager set:
 under Parameters, **Fig. 22**

Distance  .06

click **top face**, **Fig. 23**

check **Show preview**

click OK .

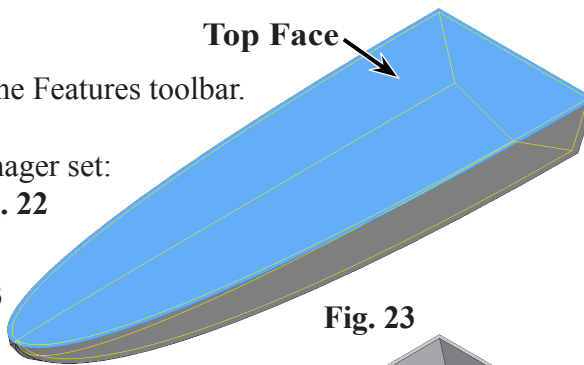


Fig. 23

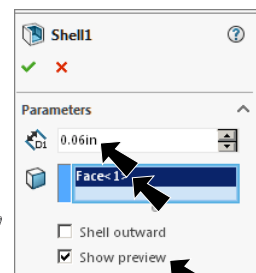


Fig. 22

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

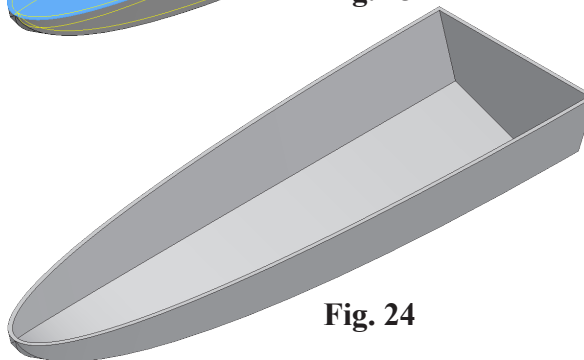



Fig. 24

J. Material PS Medium/High.

Step 1. Right click Material  in the Feature Manager and click Edit Material, Fig. 25.

Step 2. Expand Plastics (click the +) in the material tree and select PS Medium/High Flow, Fig. 26. Click Apply and Close.

Step 3. Save. Use Ctrl-S.

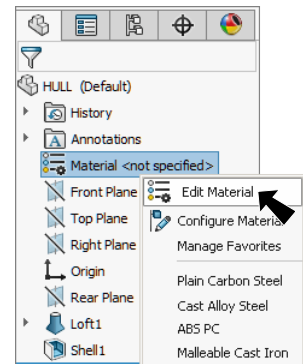


Fig. 25

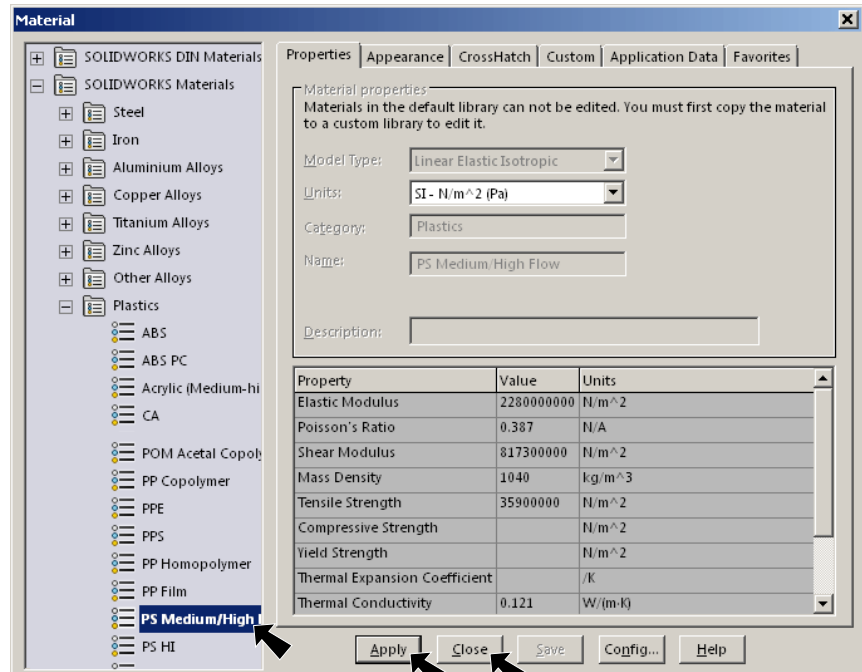


Fig. 26

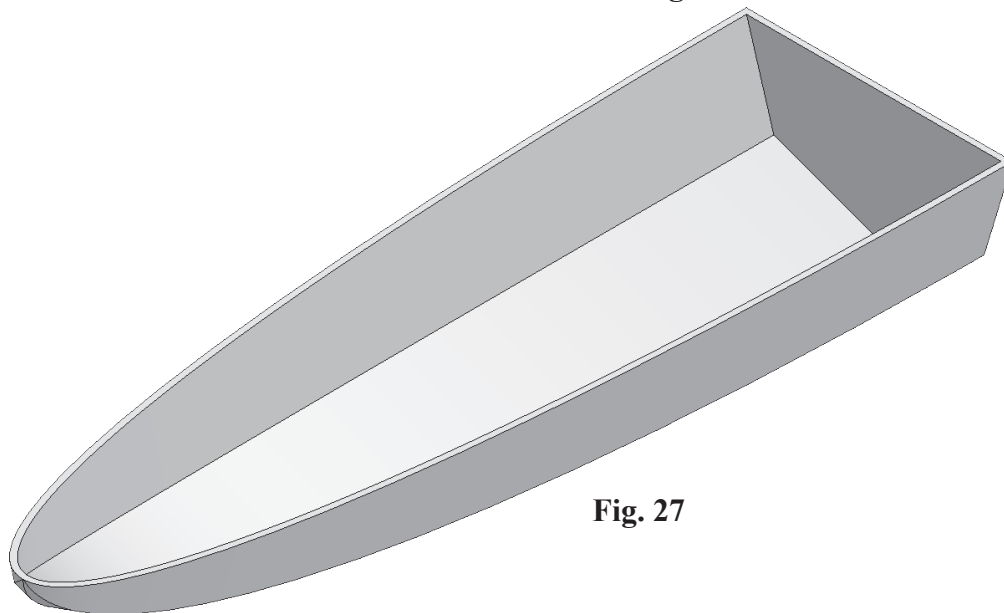


Fig. 27