

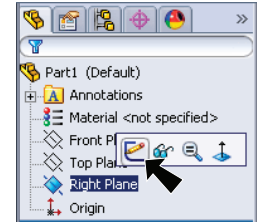


**A. Construction Rectangle.**

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



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

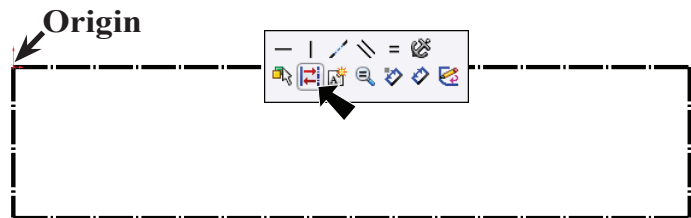


**Fig. 1**

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

Step 4. Draw a rectangle starting at the Origin


 and before you move the cursor away from the rectangle, **right click a line** and click **Construction Geometry**  on the Content menu, **Fig. 2**.



**Fig. 2**

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

Step 6. Set the dimensions as shown in **Fig. 3**.

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



**Fig. 3**

**B. Save as "ELEVATOR".**

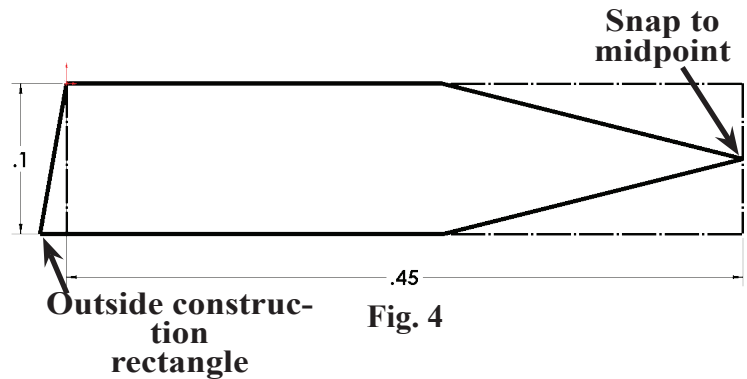
Step 1. Click File Menu > Save As.

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

### C. Side View Sketch.

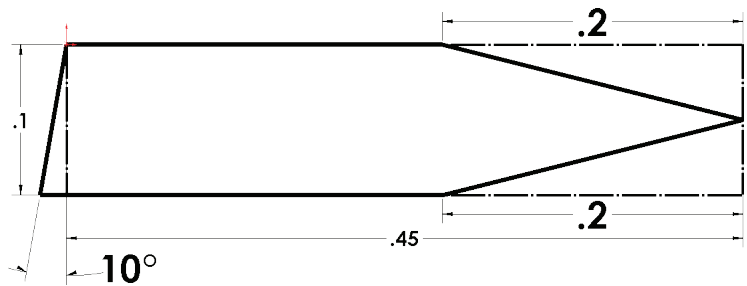
Step 1. Click **Line**  (L) on the Sketch toolbar.

Step 2. Draw lines in **Fig. 4**. Draw the bottom end of left side outside the construction rectangle. Snap the lines to midpoint on right side.

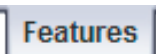


Step 3. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 4. Add dimensions as shown in **Fig. 5**. Dimension the angle between left side of construction rectangle and left side line **10 degrees** as shown in **Fig. 5**. To **Smart dimension angle**, click both lines then move the cursor between lines and click. Key-in **10** for the dimension and press ENTER. This is angle of Elevator to H Stab.



### D. Extrude.

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

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

Step 3. In the Property Manager set,

**Depth**  to **3.2**

click **OK**   
**Fig. 6 and Fig. 7.**

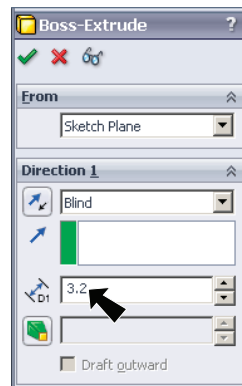


Fig. 6

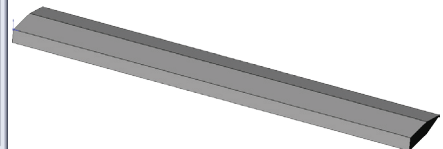


Fig. 7

## E. Material PS HI (Polystyrene).

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

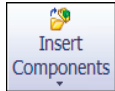
Step 2. Expand **Plastics** in the material tree and select **PS HI**. Click **Apply** and **Close**.

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

## F. Insert Elevator into Assembly.

Step 1. Open your ASSEMBLY file.

Step 2. Click **Insert Components**



on the Assembly toolbar.

Step 3. **Browse** and place **ELEVATOR** as positioned in **Fig. 8**.

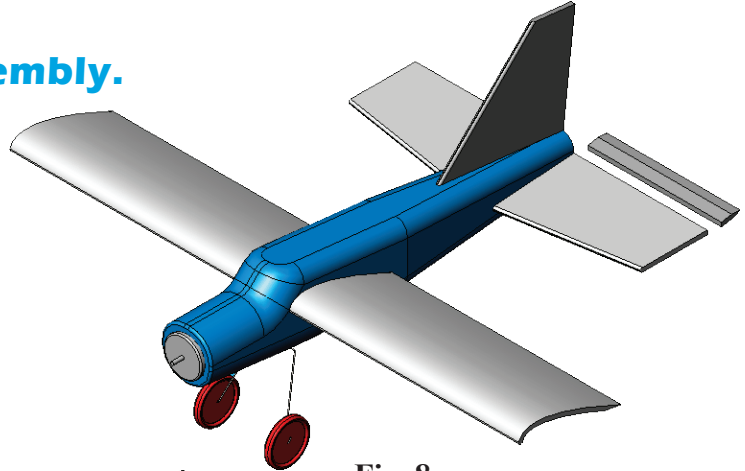


Fig. 8

## G. Mate: H Stab and Elevator.

Step 1. Rotate view to view rear of Fuselage as shown in **Fig. 9**. Hold down middle mouse button (wheel) and drag.

Step 2. Zoom in on rear of Fuselage at Elevator, **Fig. 9**. To **zoom**, hold down **Shift key** and drag middle mouse button (wheel). To **pan**, hold down **Ctrl key** and drag middle mouse button (wheel).

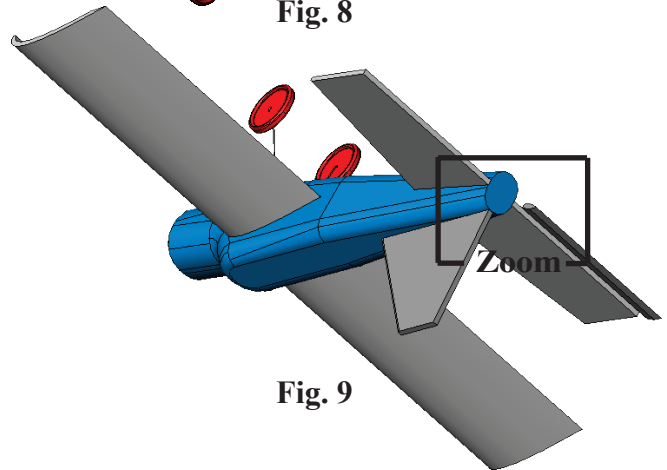



Fig. 9


Step 3. Click **Mate**  on the Assembly toolbar.

Step 4. Click **Filter Edges**  (E) on the **Selection Filter toolbar** at the bottom of the display, **Fig. 10**. If necessary, use **F5** key to display the Filter toolbar.



Fig. 10

Step 5. Click **end (root) edge of H Stab at Fuselage** and **end edge of Elevator**, **Fig. 11**.

Step 6. Click **Add/Finish Mate**  in Mate pop-up toolbar to add a **Coincident** mate.

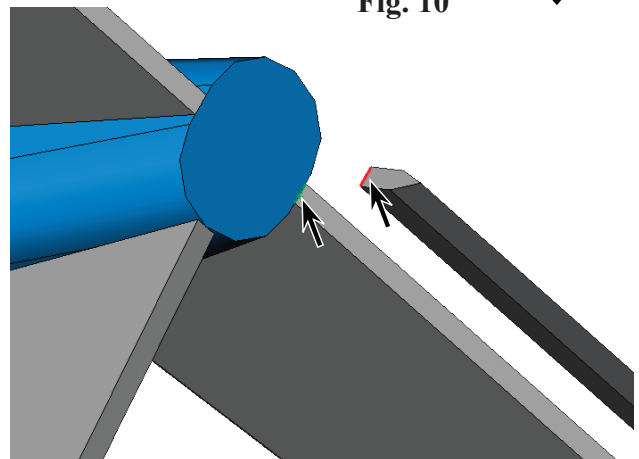
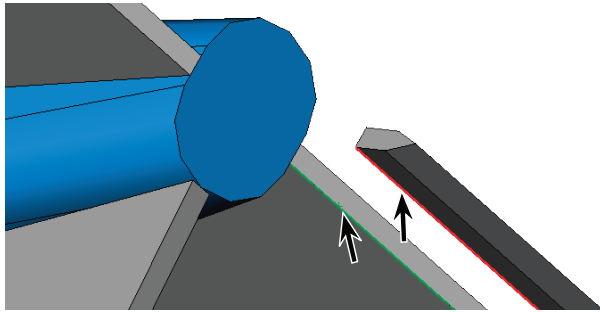


Fig. 11

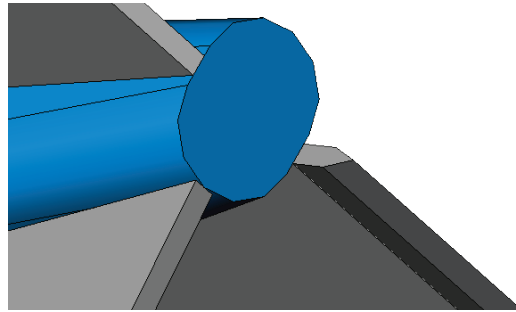
Step 7. Click **top edge H Stab** and **top edge of Elevator**, **Fig. 12**.

Step 8. Click Add/Finish Mate  in Mate pop-up toolbar to add a **Coincident** mate, **Fig. 13**.

Step 9. Click OK  in the Property Manager.




**Fig. 12**



**Fig. 13**



## H. Mirror Elevator.

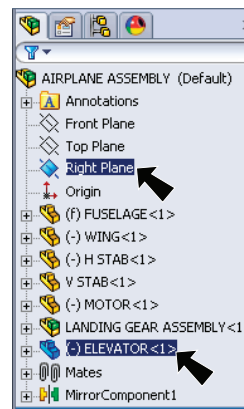
Step 1. Turn off **Filter Edges**  (E) on the **Selection Filter toolbar** at the bottom of the display, **Fig. 14**. Or use **F6** key to turn off all filters.



**Fig. 14**

Step 2. Click **Isometric**  on the Standard Views toolbar. (**Ctrl-7**)

Step 3. **Ctrl click** the **Right Plane**  and **ELEVATOR** in the Feature Manager to select both, **Fig. 15**. To **Ctrl click**, click **Right Plane** , hold down the **Ctrl** key and click **ELEVATOR**.



**Fig. 15**

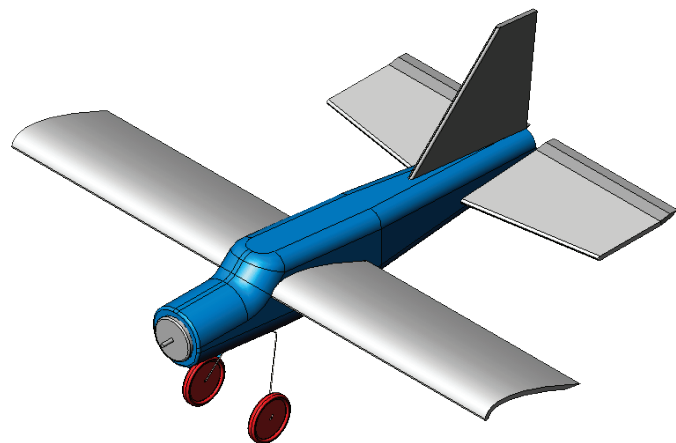
Step 4. Click **Insert Menu > Mirror Components**.

Step 5. In the Property Manager click OK , **Fig. 16** and **Fig. 17**.



**Fig. 16**

Step 6. Save. Use **Ctrl-S**.



**Fig. 17**