

Rocket 1 Nose Cone

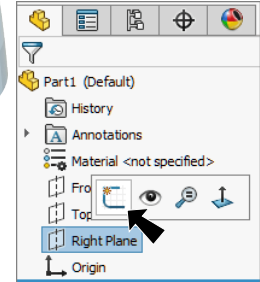
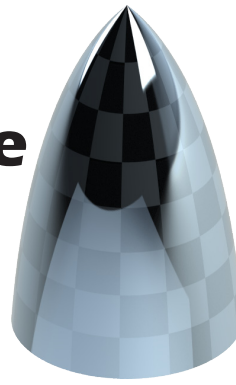





Fig. 1

A. Sketch.

Step 1. Click File Menu > New, click **Part** and OK.
 Step 2. Click **Right Plane**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 1**.

Step 3. Click **Line**  (L) on the Sketch toolbar.

Step 4. Sketch a line starting directly above the Origin  down to the Origin and a line from Origin out to the left, **Fig. 2**. Use the inferencing line, the dotted line that appears when you sketch the lines to **keep lines vertical and horizontal**. Do not add any extra lines.

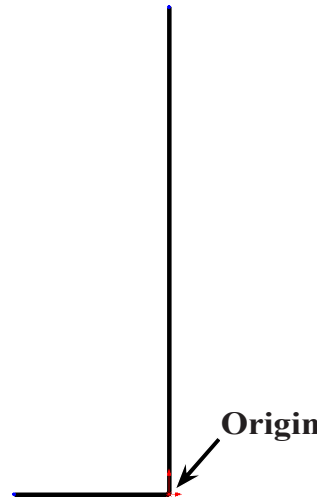


Fig. 2

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

Step 6. Add dimensions, **Fig. 3**.

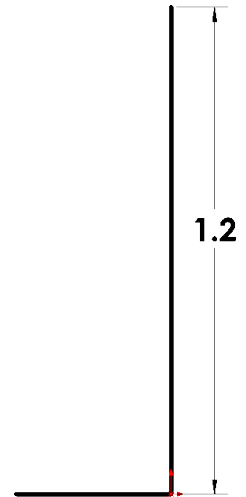


Fig. 3

Step 7. Click **Style Spline**  in the Spline flyout  on the Sketch toolbar.

Step 8. Sketch a **3 control vertex point Spline**, **Fig. 4**. Start at top endpoint of vertical line for 1st control vertex point. Then, sketch 2nd control vertex point down and to left and 3rd control vertex point at left endpoint of horizontal line. Press Escape to end spline.

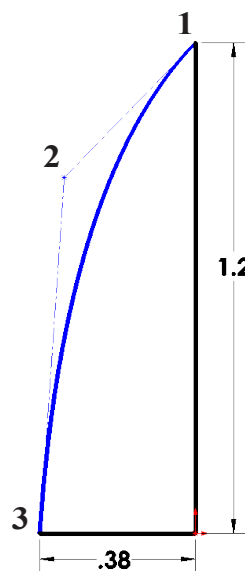



Fig. 4

Step 9. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 10. Dimensions control vertex point, **Fig. 5**.

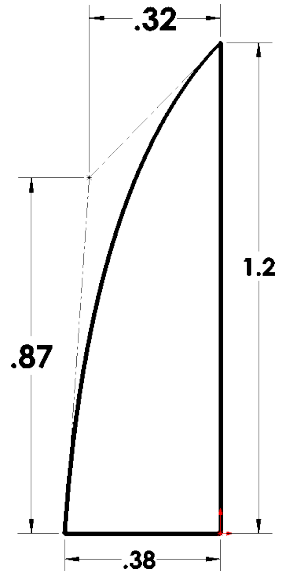


Fig. 5

B. Revolve.

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

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

Step 3. In the Revolve Property Manger set:

under Axis of Revolution
click **vertical line**, **Fig. 7**

click OK .

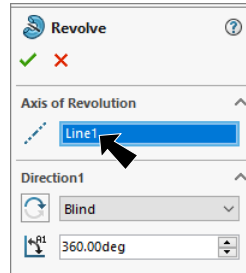


Fig. 6

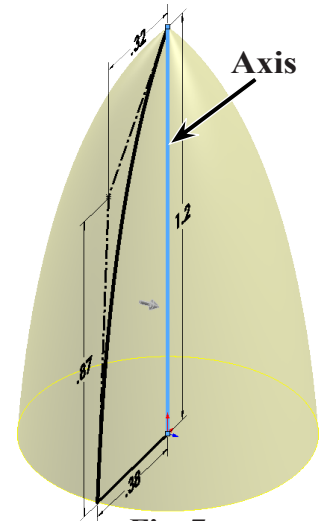


Fig. 7

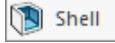
C. Save as "NOSE CONE".

Step 1. Click File Menu > Save As.

Step 2. Key-in **NOSE CONE** for filename and press ENTER.

D. Shell.

Step 1. Rotate view to view **underside of Nose Cone**, **Fig. 9**. To rotate view, hold down middle mouse button (wheel) and drag.

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

Step 3. In the Shell Property Manager set:
under Parameters, **Fig. 8**

Distance  **.02**

check **Show preview**

click **bottom face**, **Fig. 9**

click OK .

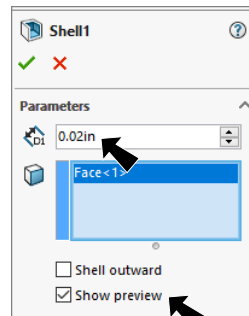


Fig. 8

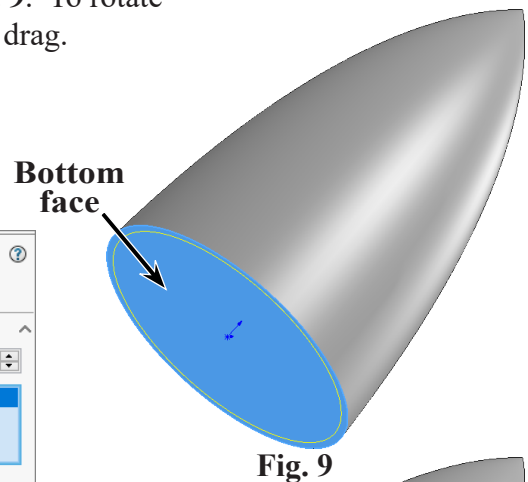


Fig. 9

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

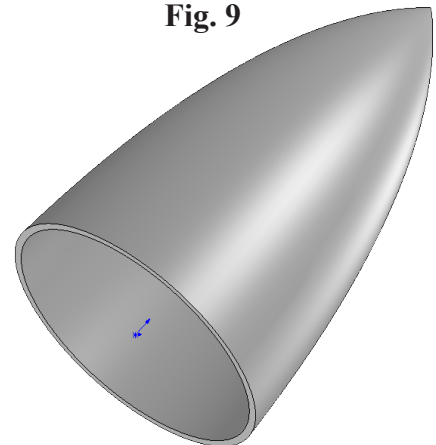


Fig. 10

E. Appearance.

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


Step 2. Click **Render Tools**  on the Command Manager toolbar.

Step 3. Click **Render Region**  on the Render Tools toolbar.

Step 4. Adjust **render region** to fit around Nose Cone, **Fig. 12**.

Step 5. Click **Integrated Preview**  on the Render Tools toolbar.

Step 6. Click **Edit Appearance**  on the Render Tools toolbar.

Step 7. In the Appearances Task pane , expand **Miscellaneous**, click **Studio Materials** and in the lower pane select **reflective checker floor**, **Fig. 11**.

Step 8. Click Back over in the Appearances Property Manager under Color, **Fig. 13** set **RGB values** to:
R 167
G 209
B 255
Don't click OK.

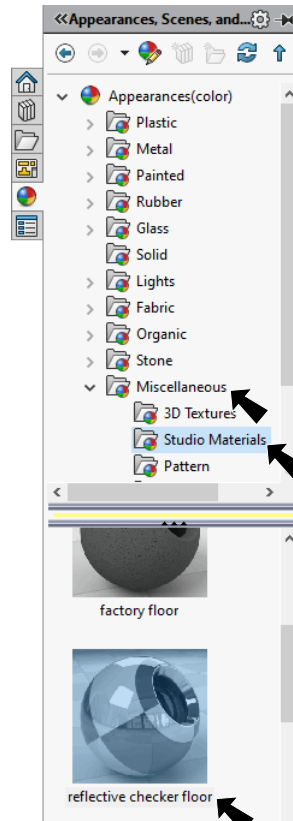


Fig. 11

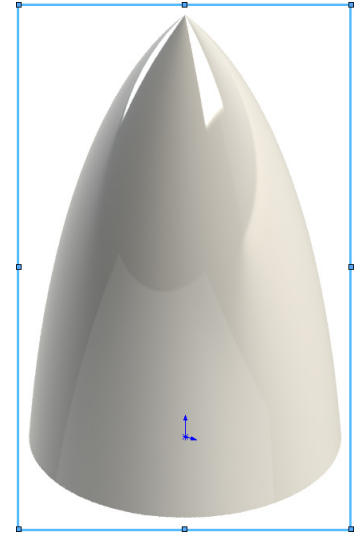


Fig. 12

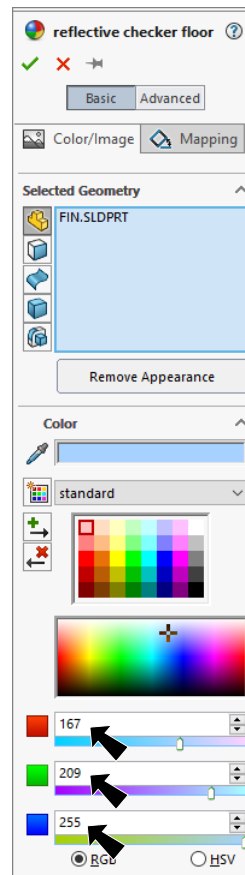


Fig. 13

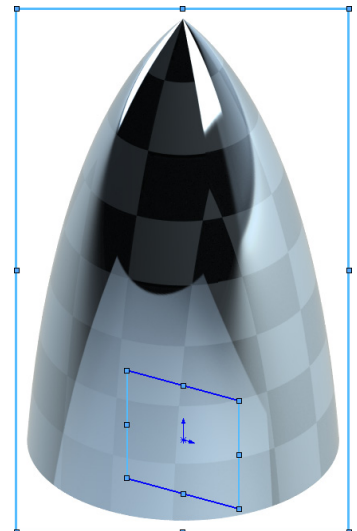



Fig. 14

Step 9. In the Appearances Property Manager
 click **Advanced button** at the top of panel, **Fig. 15**

click **Mapping tab** 
 under Mapping
 Mapping type **Cylindrical**
 Axis direction **XY**

under Size/Orientation
 uncheck **Fixed aspect ratio**

Width  **.17**

Height  **.30**

click **OK** .

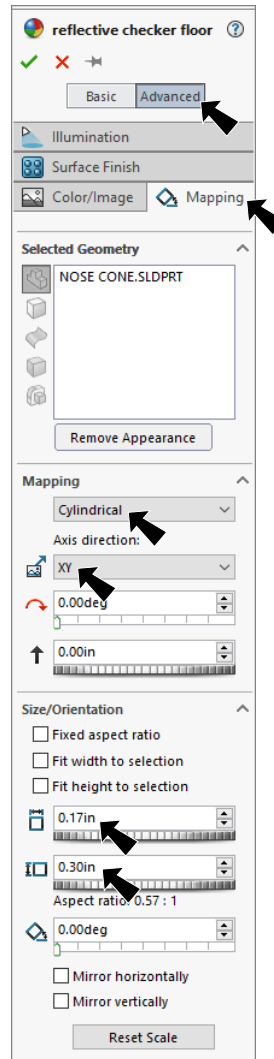
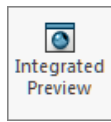


Fig. 15

Step 10. Turn off **Integrated Preview**



then **Render Region** when done.

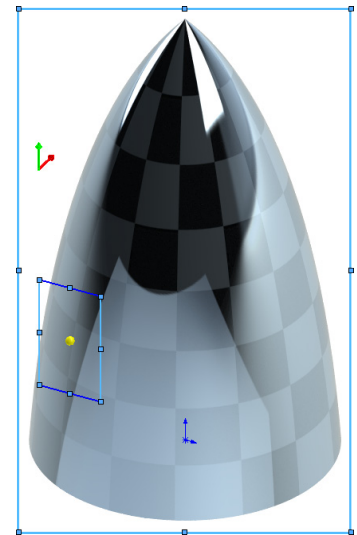
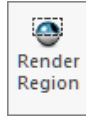


Fig. 16

Step 11. Save. Use **Ctrl-S**.