

# Pro/DESKTOP Tips



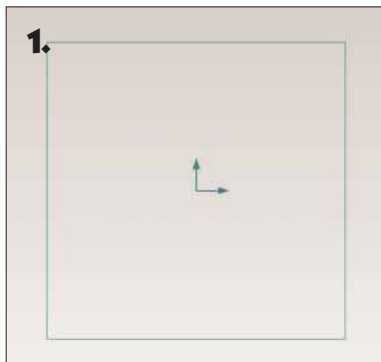
by  
Steve Smith

## Basic Project Creation with

# Pro/DESKTOP

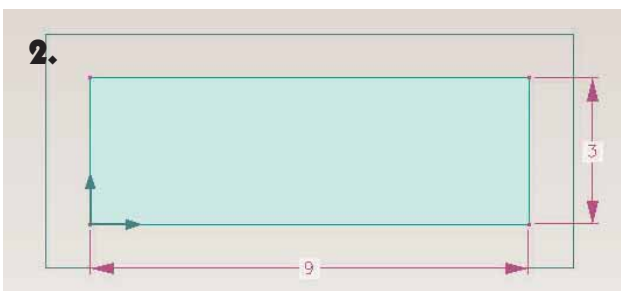
It is easy for students to get their design ideas into a computer model and develop a set working plans utilizing Pro/DESKTOP as a design tool. In this example we will look at how to sketch the body of a simple CO<sub>2</sub> race car.

## Basic Project Creation Using Pro/DESKTOP as a Design Tool.

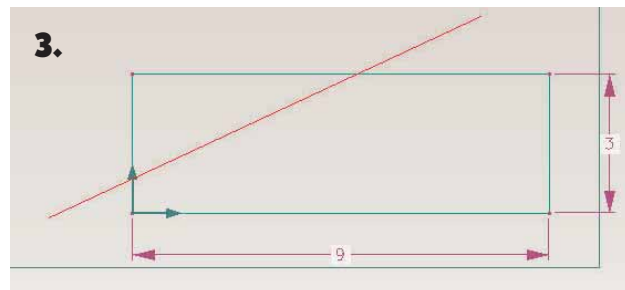


1. Open a new Pro/DESKTOP design file. Press **Shift/W** keys to switch to **Base View**. This will make it easy to see the shape of the design profile as it evolves.

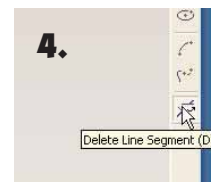
2. Starting at the center arrow draw a rectangle that is 9 inches long by 3 inches tall.



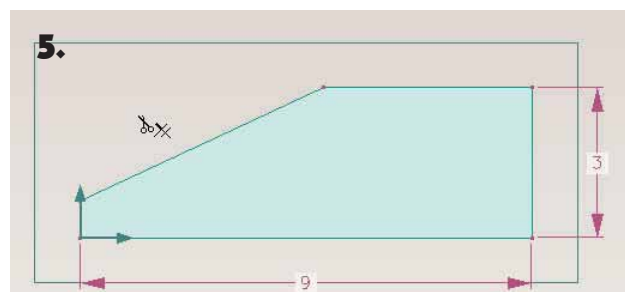
3. Use the **Straight Line** tool to draw an angled line through the rectangle. Notice the fill color is now gone from inside the rectangle indicating that the rectangle is no longer a **Valid Profile**.



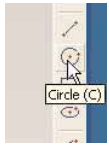
4. Select the **Delete Line Segment** tool from the menu on the right hand side of the screen.



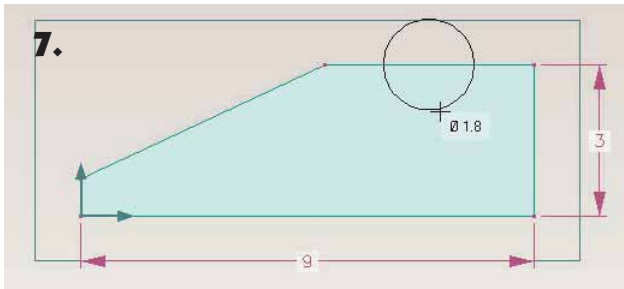
5. Using the **Delete Line Segment** tool remove the ends of the line that extend beyond the edges of the rectangle. The fill color will return to the rectangle indicating that it has again become a **Valid Profile**.



6. Add another shape to the rectangle. Use the **Circle** tool to draw a circle that extends into the rectangle. The rectangle will lose its fill color as it again becomes an **Invalid Profile**.



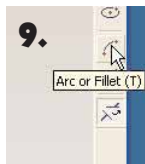
7. Using the **Delete Line Segment** tool, remove the top portion of the circle and the segment of horizontal line which passes through the center of the circle.



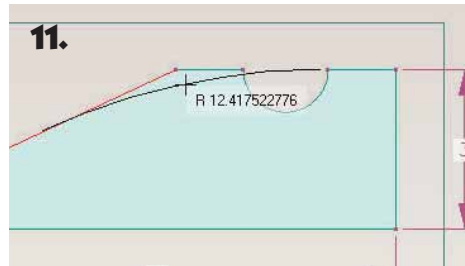
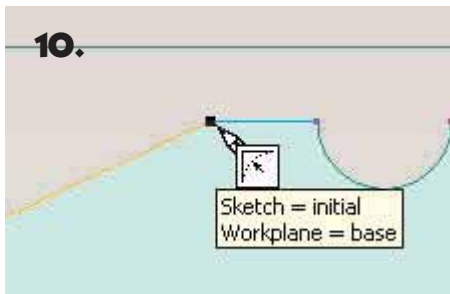
8. The rectangle will again become a **Valid Profile**.



9. Select the **Arc or Fillet** tool located on the right hand side of the screen. Click on the intersection of the horizontal and angled lines.

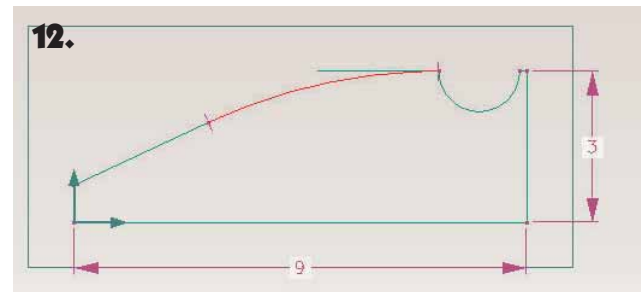


10. This spot has been selected as a place for a gentle slope.

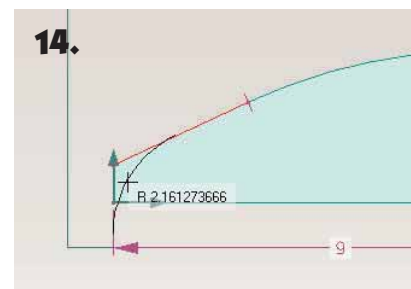
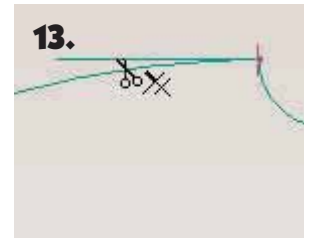


Move slowly as is very easy to over do this step.

12. The rectangle will become an **Invalid Profile**. This is due to the segment of horizontal line remaining at the top of the rectangle.

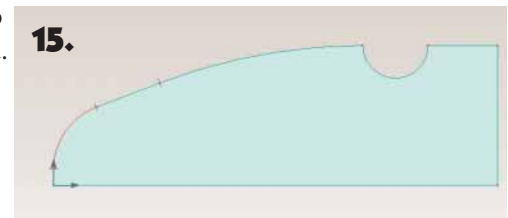


13. Using the **Delete Line Segment** tool remove the remaining line segment at the top of the rectangle. The rectangle will become a **Valid Profile**.

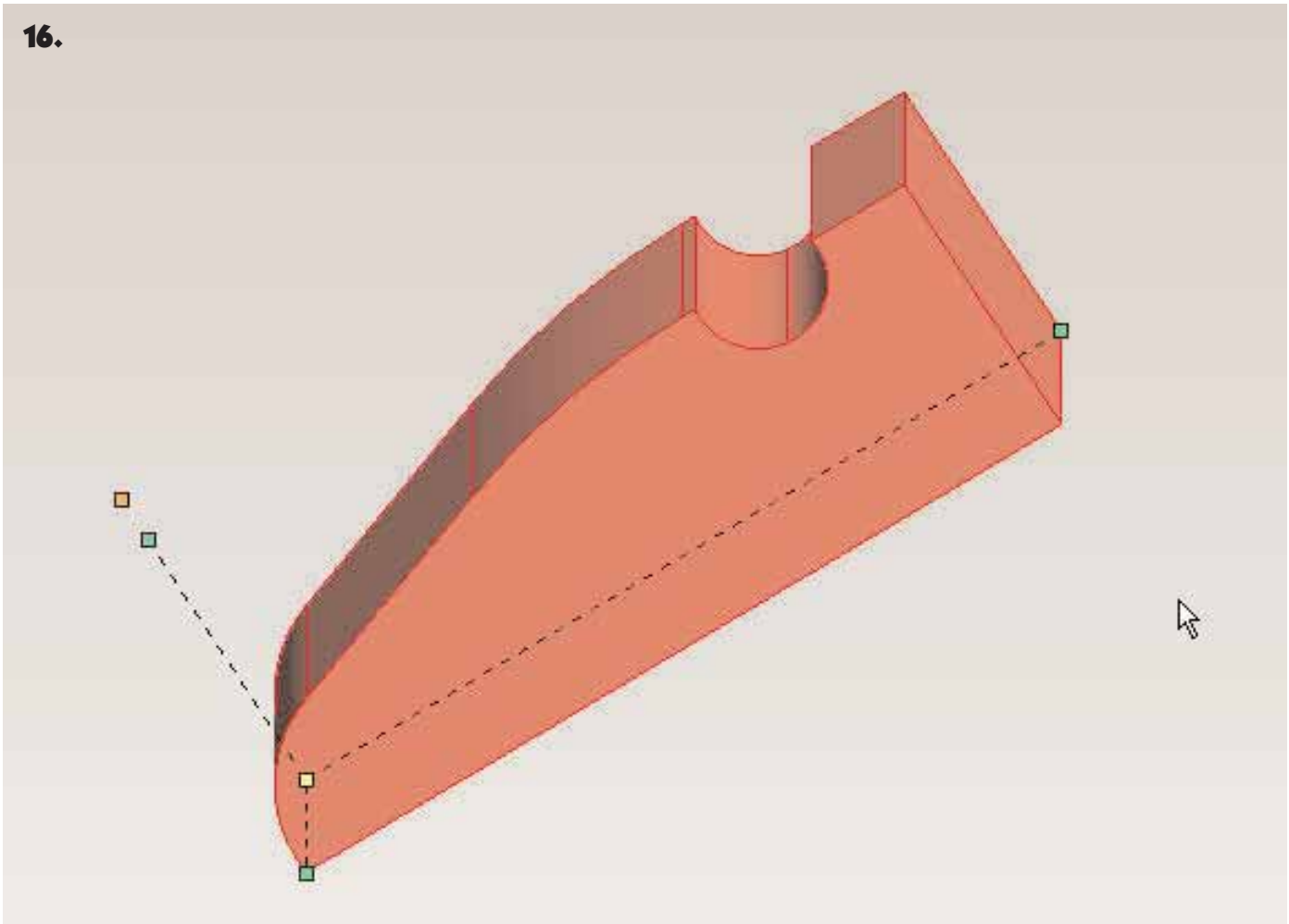


14. Use the **Arc or Fillet** tool repeat the process to modify the shape at the front of the rectangle. Remove excess lines to restore the rectangle to a **Valid Profile**.

15. And there it is, a simple sketched profile for a CO2 race car ready to be extruded.



16.



The profile has been extruded and is ready for further modifications. Rounding edges, extruding holes for axles and CO2 cartridge are just a few of the modifications that could serve to further improve the design. By importing the design into drawing mode it is easy to generate a 3-view drawing. This plan may be taken to lab and utilized during the construction phase of the project.

Start out with simple designs. Once the basics have been mastered students will quickly and competently move into more advanced design projects. ●

*Steve Smith*

is technology coordinator at Newburyport High School in Newburyport, Massachusetts. He is also a Pro/DESKTOP trainer.