




(15 pts) Approx. 1 day

The first part of our unit is a return to the basics of Autodesk and some cool new tools. The last unit ended with the modeling of our many puzzle cube pieces and the assembling of those pieces into a complete puzzle cube. Here we'll start back with the extrude tool and think about the different options available within that tool. We'll then expand our understanding of Autodesk functions by looking at the holes, fillets, and chamfer tools before practicing them in the creation of the HFC Practice Part.

1. Start out by watching the *Sketches & Extrusions* presentation. It will be a good review of things from last unit, and should point to the ideas of extruding again. Take a full page of notes. I know it will feel like there isn't that much to write about, but here you need to take careful notes on ALL the detailed options that are available when extruding. The video will help a little bit, and you'll want to open Autodesk and play with the tool a bit to learn what each option can do – make sure to write down the details!
2. Then, watch the *Holes, Fillets & Chamfers* presentation. Again, take a full page of notes. In these notes, focus on the options available with the hole, fillet, and chamfer tools. Describe what each does and the different choices you have when using each one.
3. The last part of this section is to create the HFC Practice Part. Start a new part in Autodesk and build it using the rectangle, extrude, hole, fillet, and chamfer tools. In the end, your part should meet the following criteria:
  - a. Start with a cube that is 1" x 1" x 1"
  - b. One face should have a hole drilled all the way through it
  - c. One side of the whole should be counter-sunk using the hole tool
  - d. The other side of the hole should have a chamfered edge
  - e. One face of the cube should have a square piece extruded away from it
  - f. The edges of the extruded square should be filleted
  - g. One fact of the cube should have a triangle extruded away from it
  - h. The edges of the extruded triangle should be chamfered
4. Share your completed HFC Practice Part with Mr. Benshoof before continuing!

Part 1: Tasks	5 points	4-3 points	2-1-0 points
 Basic Autodesk Notes	+ You took a full page of notes on Autodesk modeling + Your notes include details about ALL the options in the extrude function	- Your notes are less than a page - You did not include details about the extrude function options	- Your notes are missing - Your notes are very brief
 Holes, Fillets, and Chamfers Notes	+ You took a full page of notes on Holes, Fillets, and Chamfers + Your notes include details about all the options available in each of these new tools	- Your notes are less than a page - You did not include details about the tool options	- Your notes are missing - Your notes are very brief
 HFC Practice Part	+ You built the "Holes, Fillets, Chamfers" (HFC) Practice Part. + Your part matches the description above	- Your part does not match all of the descriptions above	- Your part is very incomplete - You did not make the HFC Practice Part

