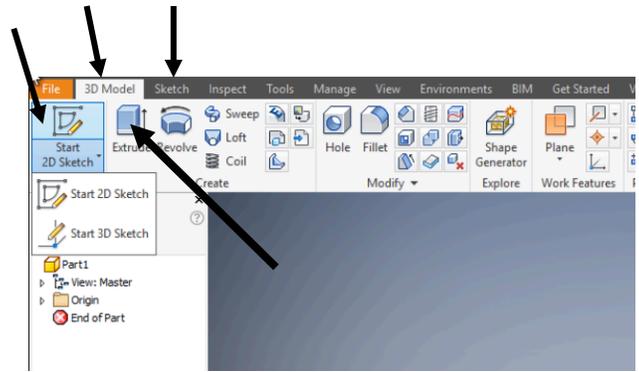
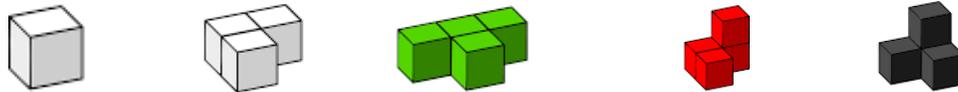


(30 pts) Approx. 3 days

The first part of our project is about learning how to use a program called Autodesk Inventor Professional 2019. This software is what professional engineers use to create 3-Dimensional models of things like tools, toys, engine parts, building structures, or airplanes. It's a very useful tool in our engineering lab, and something we want to get some experience with.



1. Start by watching the Autodesk Tutorial on our class website, while taking a full page of notes in your engineering notebook. Focus on what buttons you'll need to use as you design your 3D models (see above).
2. Create 5 practice parts in Autodesk Inventor. The 5 pieces should be 3D versions of standard Tetris pieces as shown below. Save each Inventor .IPT file (the part you built) to your jump drive



3. Finally, build your Mr. BlockMan/Ms. BlockWoman in Autodesk. Your BlockPerson should look like a person and be made of at least 5 rectangular blocks. Keep in mind as you work in Autodesk that whatever you make will need to be able to be built out of wooden blocks later in the unit! *Be sure to save your BlockPerson file as an Inventor .IPT file to your jump drive.*
4. Have Mr. Benshoof *approve your BlockPerson design before 3D Printing!* Watch the tutorial to learn how to export your design as an .STL file and get it printed.

Part 1: Tasks	5 points	4-3 points	2-1-0 points
Autodesk Notes	+ Watch the Autodesk tutorial carefully + Take 1 page of good notes in your engineering notebook	- Less than a full page of Autodesk notes	- Very brief or no notes in your engineering notebook
Build Tetris Pieces	+ Build all 5 Tetris pieces in Autodesk + Save each piece as its own .IPT file named as "NAME_TETRIS_NUM.ipt"	- Only 4 or 3 Tetris pieces built - Files saved in the wrong format	- 2 or fewer Tetris pieces built - Files not saved
Build BlockPerson	+ BlockPerson is built in Autodesk + BlockPerson is made of at least 5 blocks + BlockPerson is saved as an .IPT file	- BlockPerson is made of 4 or fewer blocks - BlockPerson saved in wrong format	- BlockPerson is not recognizable as a person - BlockPerson is not saved
Print BlockPerson	+ Export BlockPerson as a .STL file + (if possible) 3D print BlockPerson with maximum dimension of 1.5"	- Model not printed with the correct maximum dimension	- Model not printed
	10 points	9-5 points	4-0 points
Complete Volume Assignment	+ You completed the entire Volume Assignment + You checked your work with the answer key	- You did less than the entire assignment - You did not check your work with the key	- You did less than half of the assignment

