

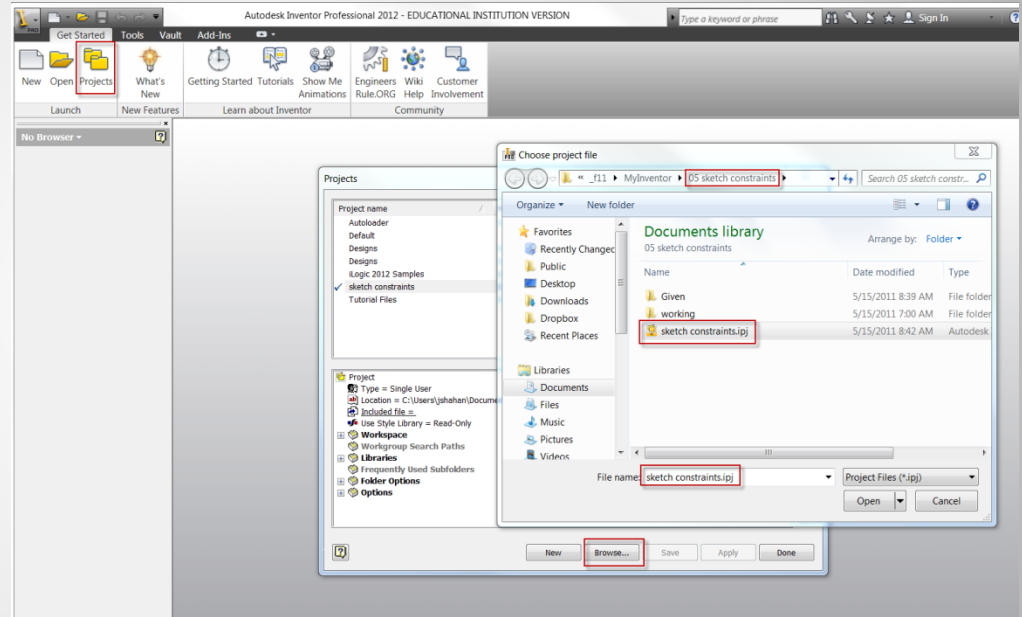
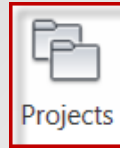
Sketch Constraints II

Using Autodesk Inventor

Continued From Sketch Constraints I

INITIALIZATION

- Start: Inventor
- Select:
 - Projects
 - Browse:
 - Project Name:



Example Project Window

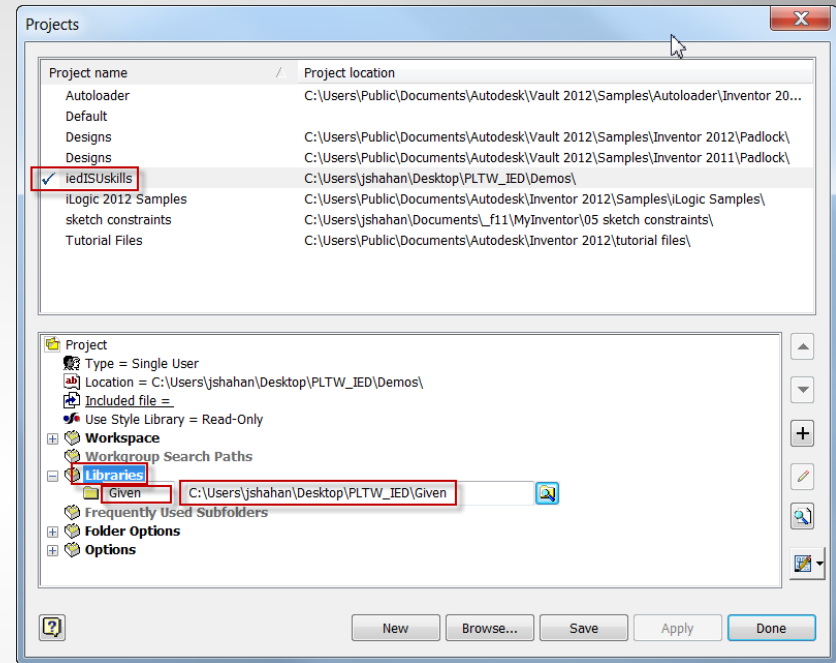
- Your folders will be different

b. Startup

- ❑ Find / open:
 - Project
- ❑ Check Settings
 - Libraries
 - Workspace

Example Project Window

- Your folders will be different



Example Project

a. Inventor: Folder | Project

- Parallel
- Perpendicular
- Equal

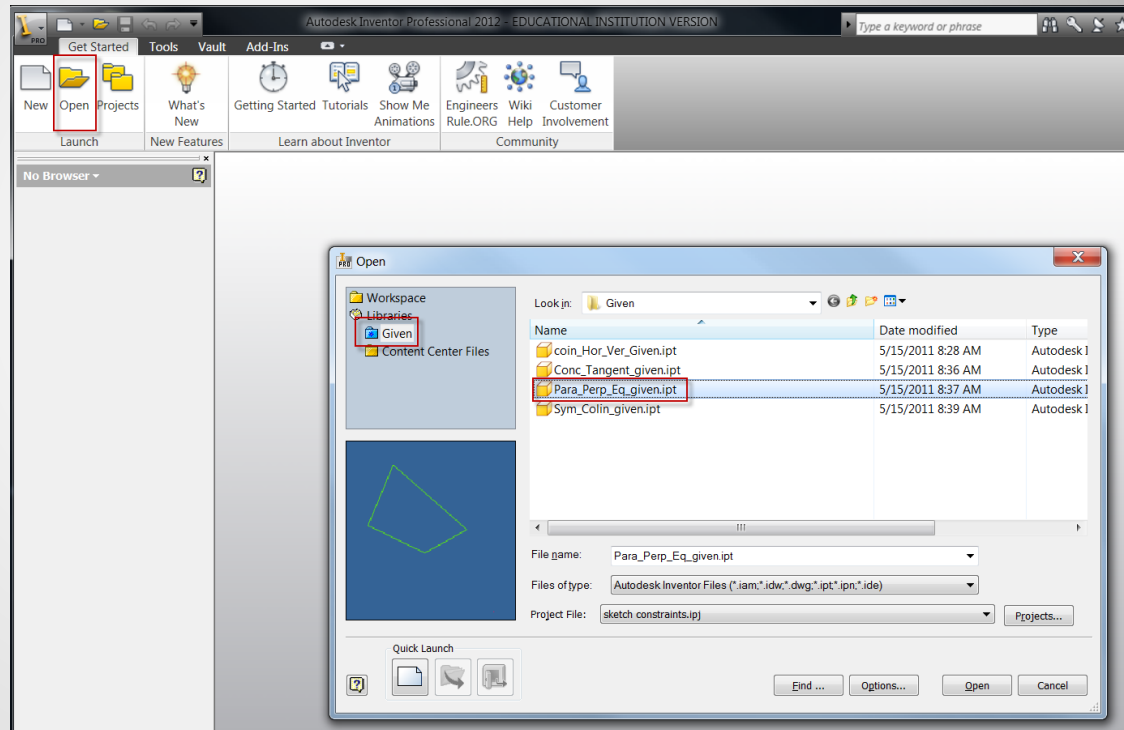
2D SKETCH CONSTRAINTS

- Open



- Library:

- File:  Para_Perp_Eq_given.ipt

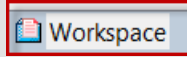


a. Open (given file)

- Save-As:



Save in:

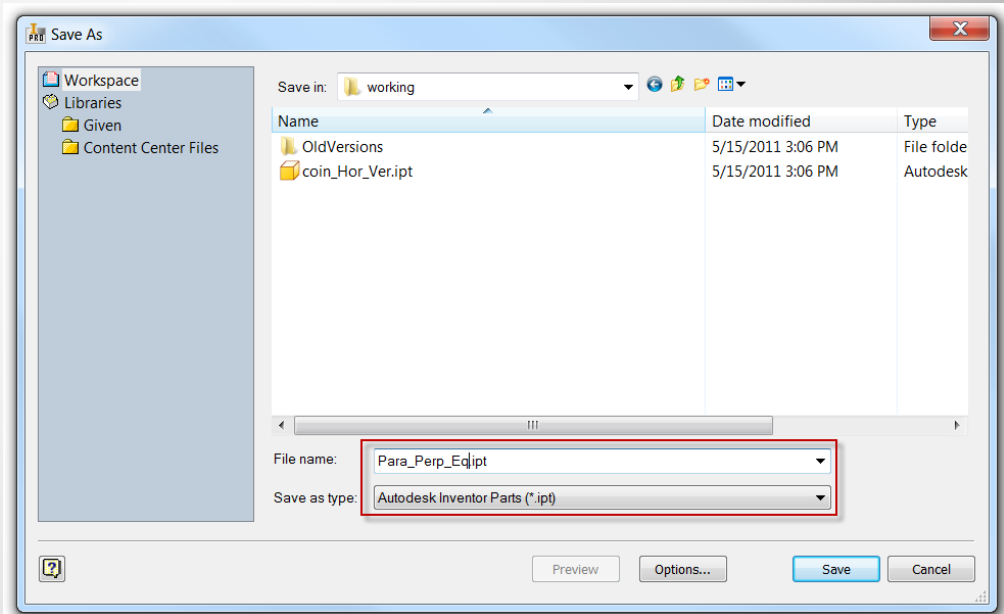
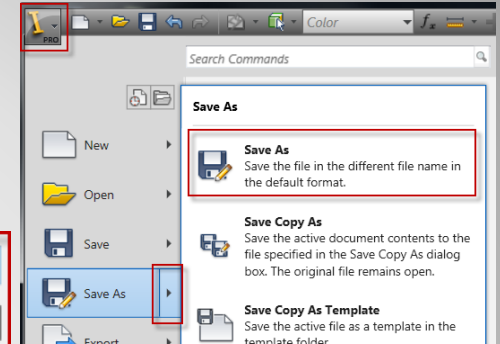


File name:

Para_Perp_Eq|ipt

File type:

Autodesk Inventor Parts (*.ipt)



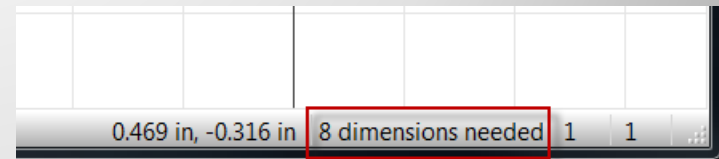
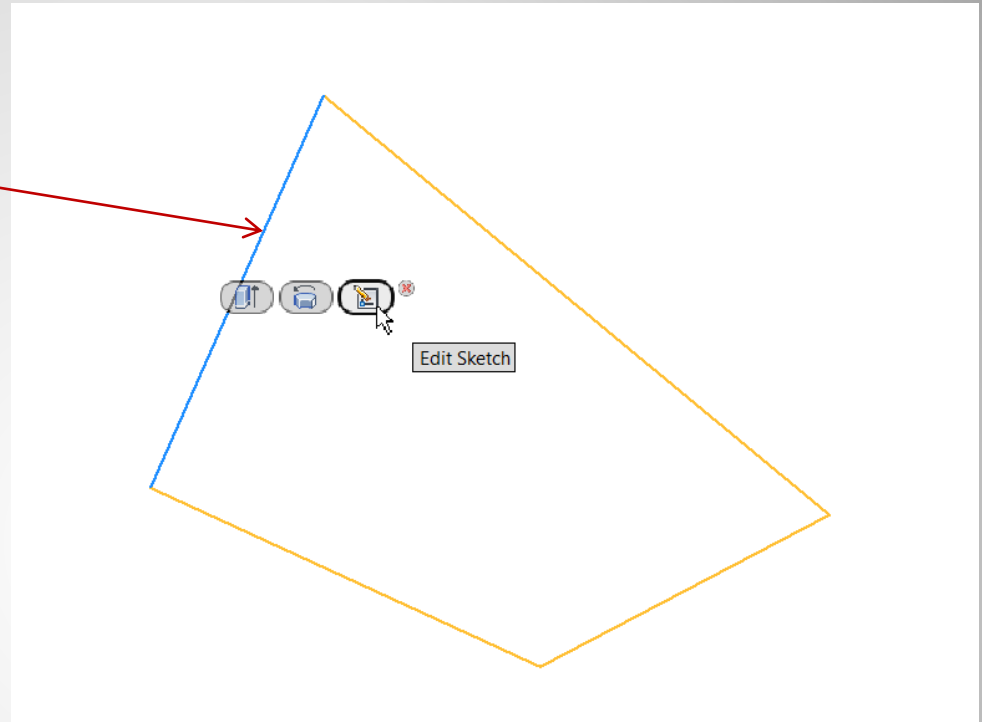
b. Save a Copy

- Pick <LMB>

- the line

- Edit Sketch 

- Note: 8 dimensions needed

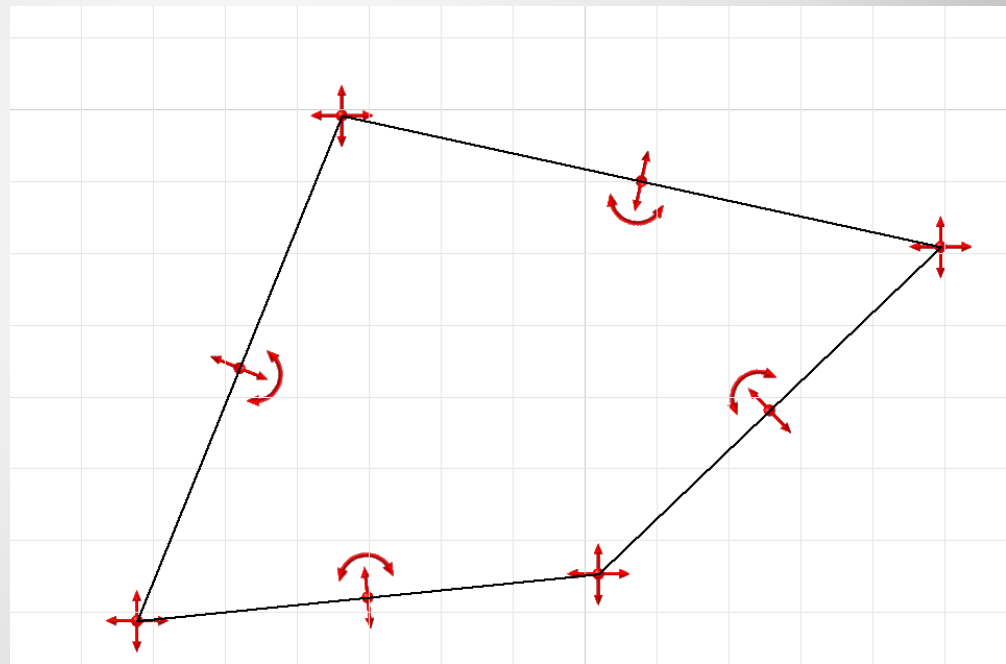
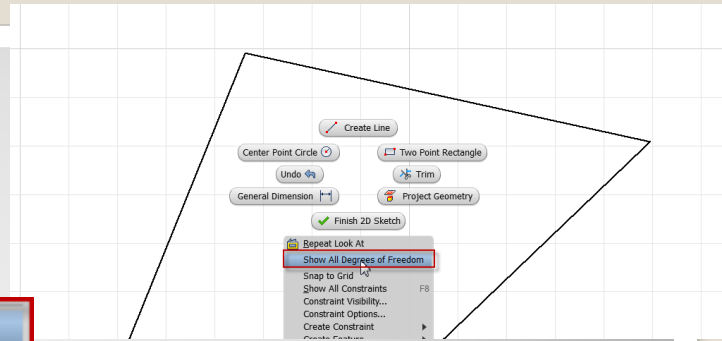


c. Edit the sketch

- De-select: <Esc> key
- Pop-up Menu: <rmb>

Pick <lmb> : **Show All Degrees of Freedom**

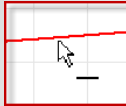
- Display:



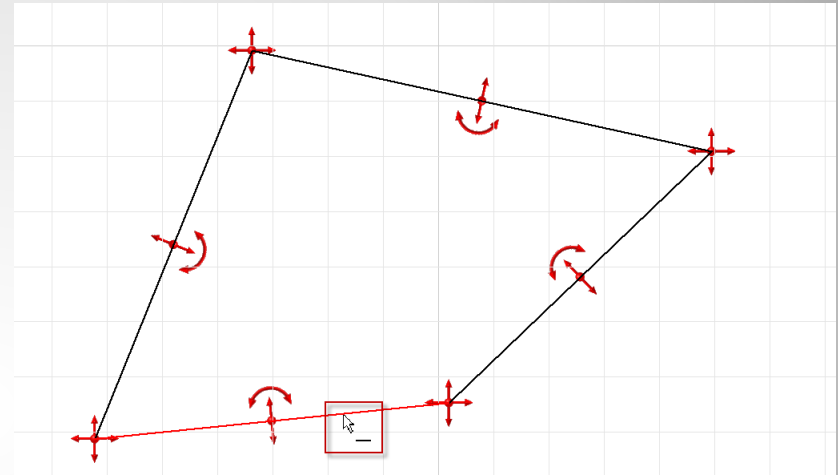
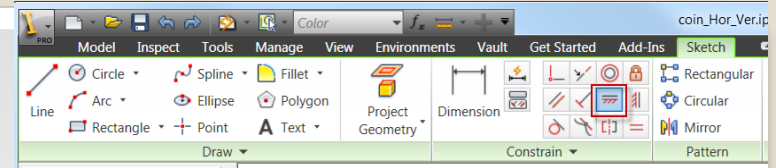
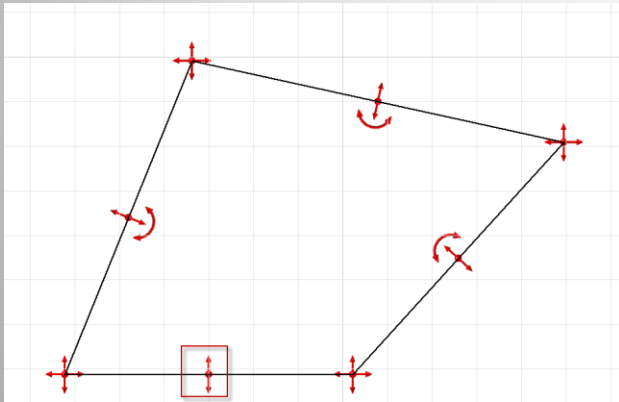
d. Show Degrees of Freedom

- Pick <Imb>:

Horizontal: 

Line: 

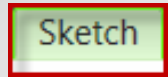
- Verify Results:



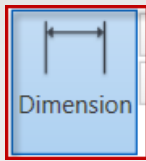
e. Add: horizontal constraint

- Pick <Imb>:

- ✓ Sketch:



- ✓ Dimension:



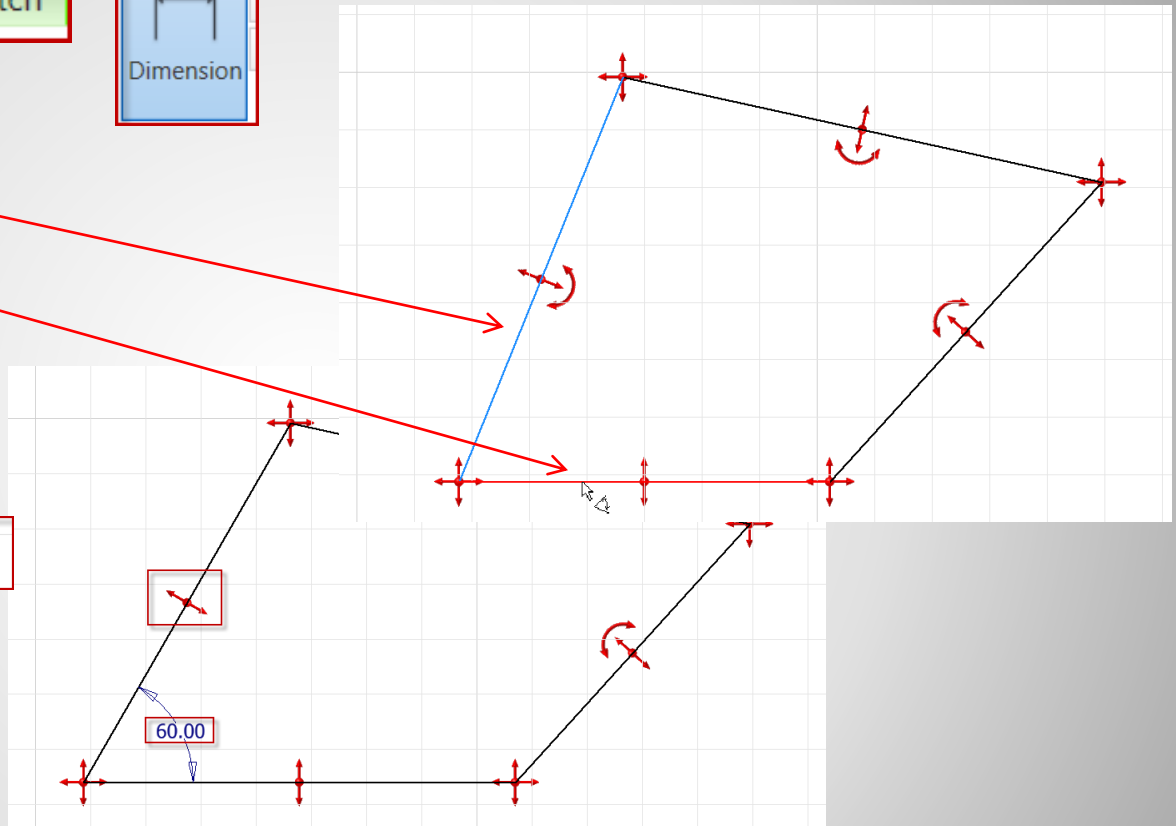
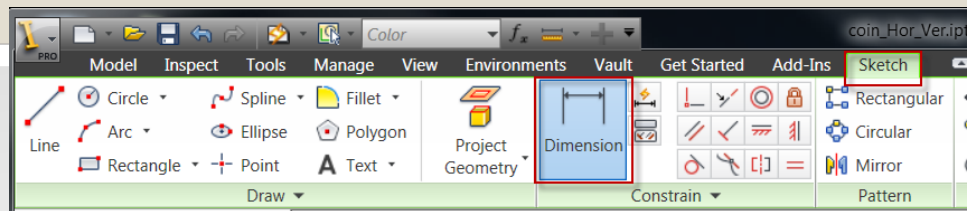
- ✓ Line 1

- ✓ Line 2

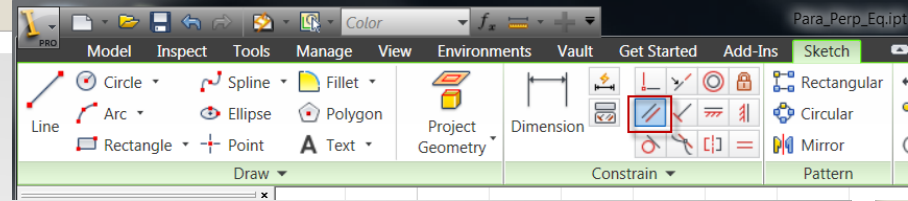
- Results:

- Value: 60.00

- Restraint:



f. Dimension - Angle



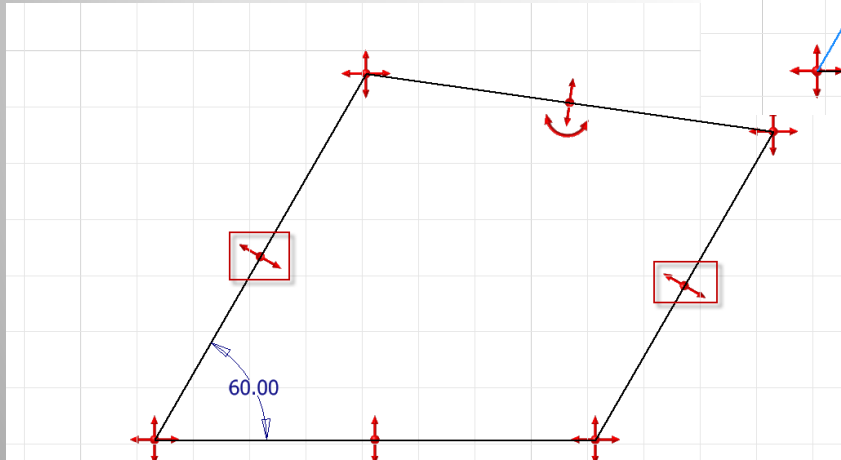
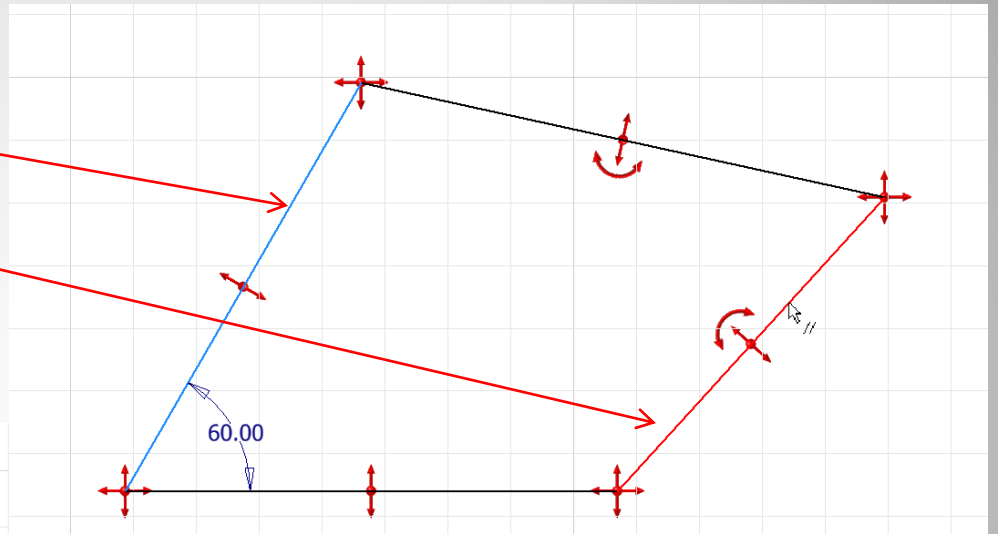
- Pick <Imb>:

- Parallel: 

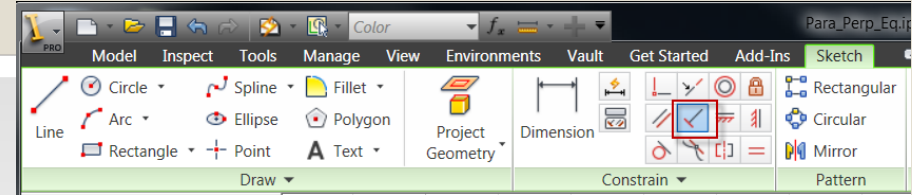
- Line 1:




- Line 2:

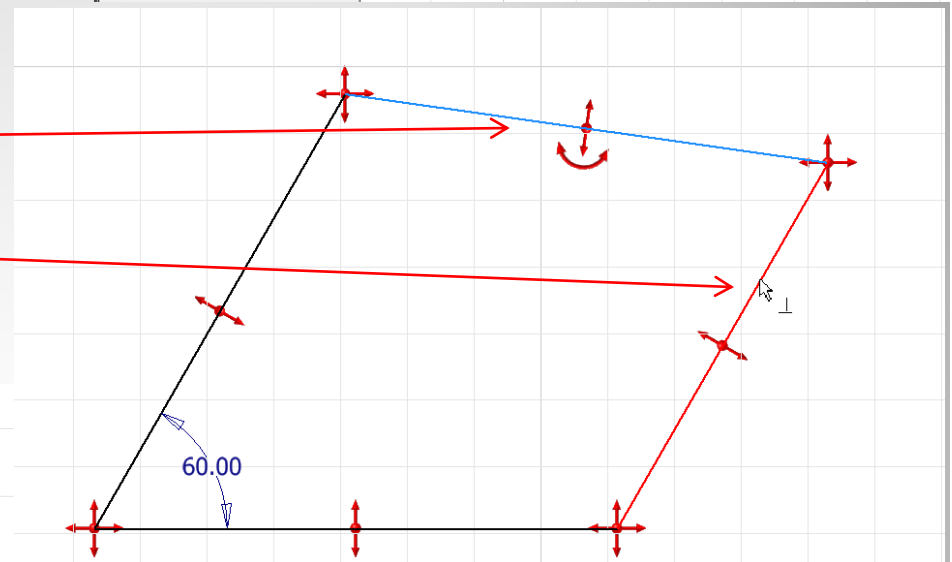
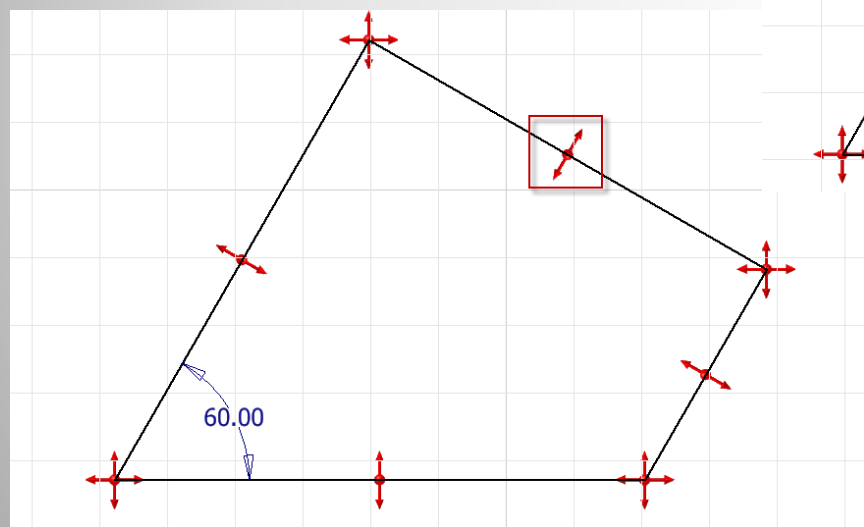
- Verify:



g. Add: parallel



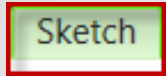
- Pick <Imb>:
 - Perpendicular: 
 - Line 1: 
 - Line 2: 
- Verify:



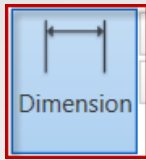
h. Add: perpendicular

- Pick <Imb>:

- ☑ Sketch:



- ☑ Dimension:



- ☑ Aligned:

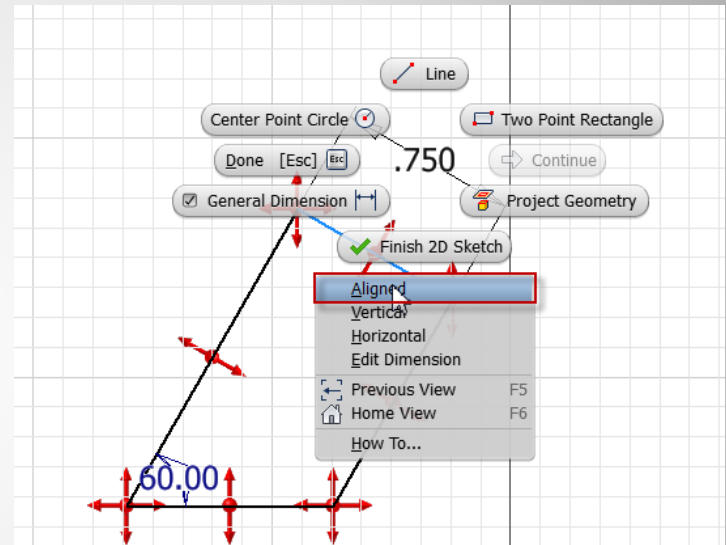
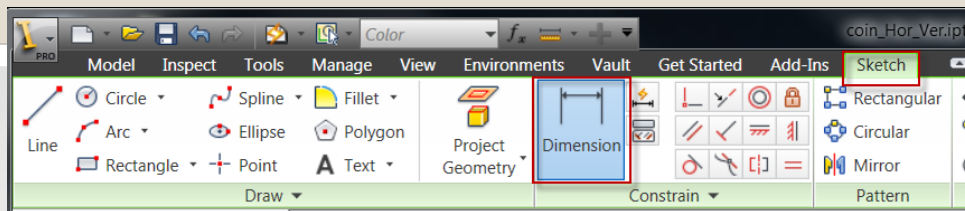
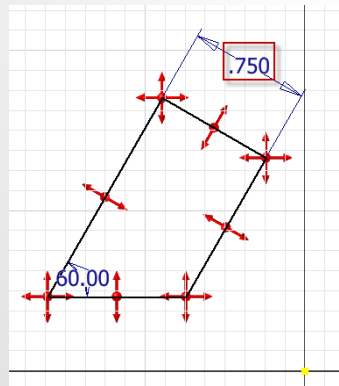


- Results:

- Value:



- Restraint:



j. Dimension

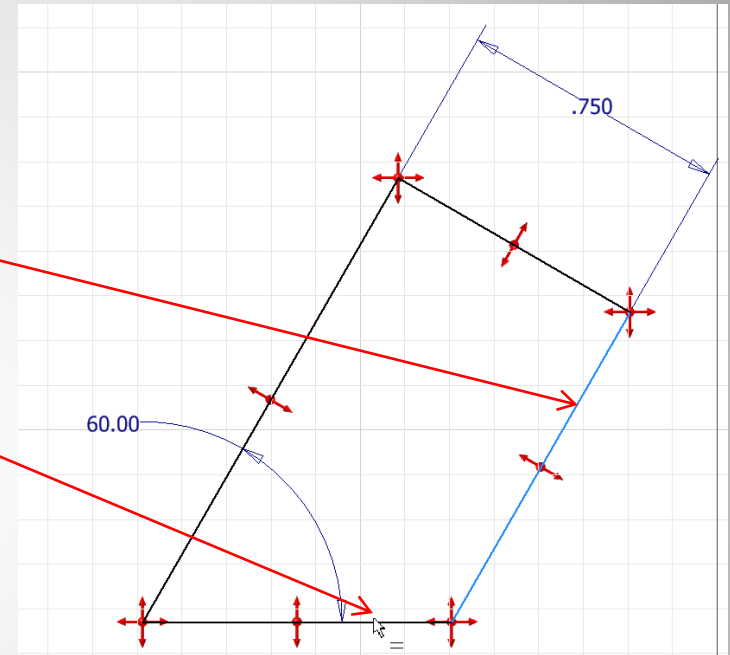
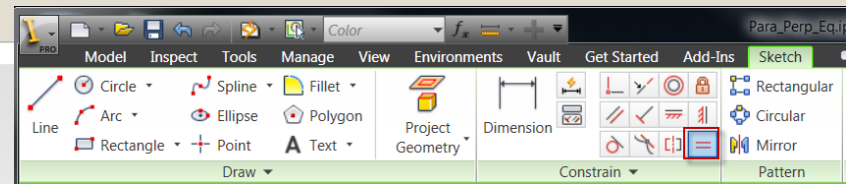
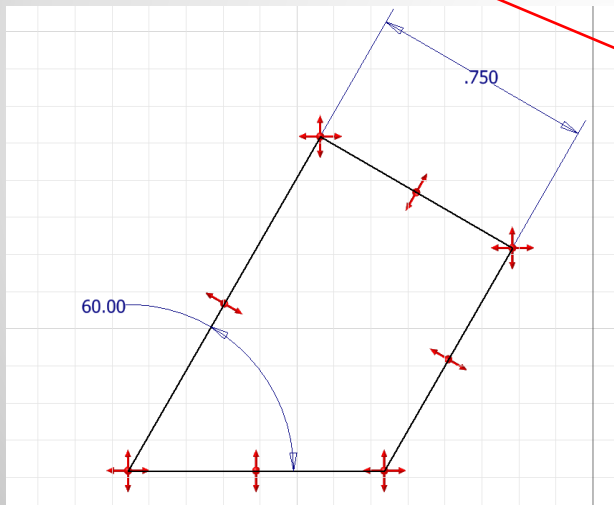
- Pick <Imb>:

- Equal: 


- Line 1:

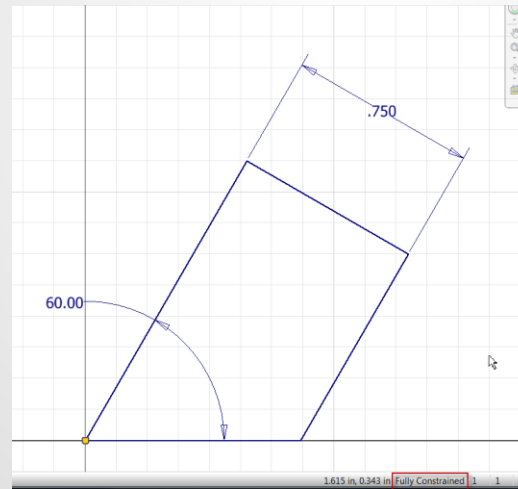
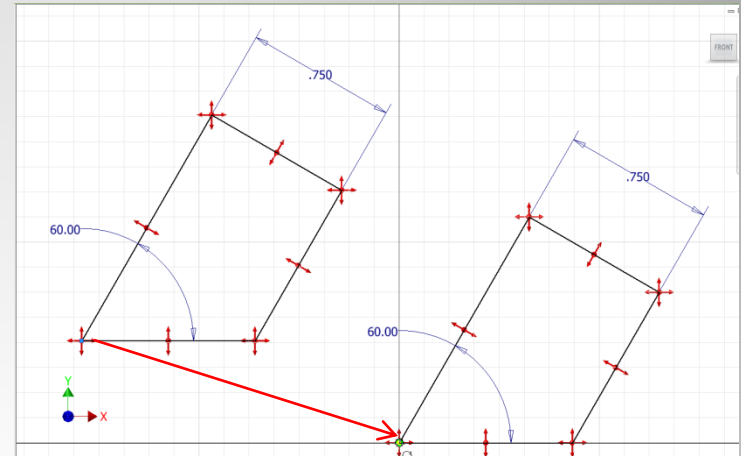
- Line 2:

- Verify:

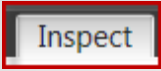




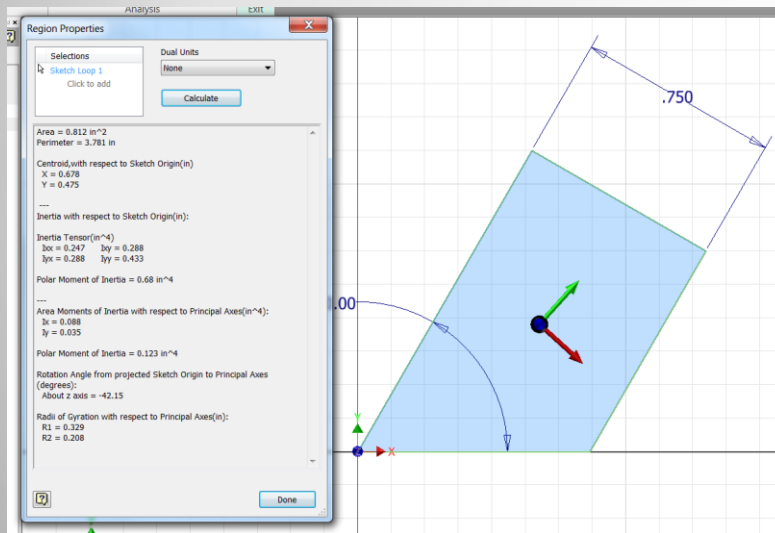
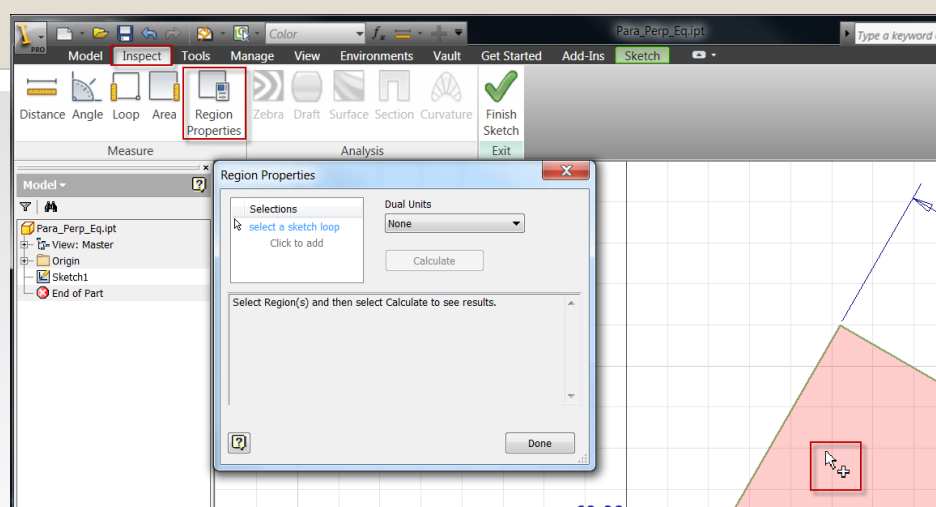
k. Add: Equal Length

- Pick <Imb>: corner
- Drag: to origin
- Results: Coincident 
- Note:
 - No Degrees of freedom
 - **Fully Constrained**



I. Coincident - origin

- Pick <Imb>:
 - ✓ Inspect 
 - ✓ Region Properties 
 - ✓ The region: 
- Results:



m. region properties