

Sketch Constraints I

Using Autodesk Inventor

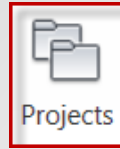
1.INITIALIZATION

- Start: Inventor

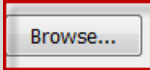


- Select:

- Projects



-

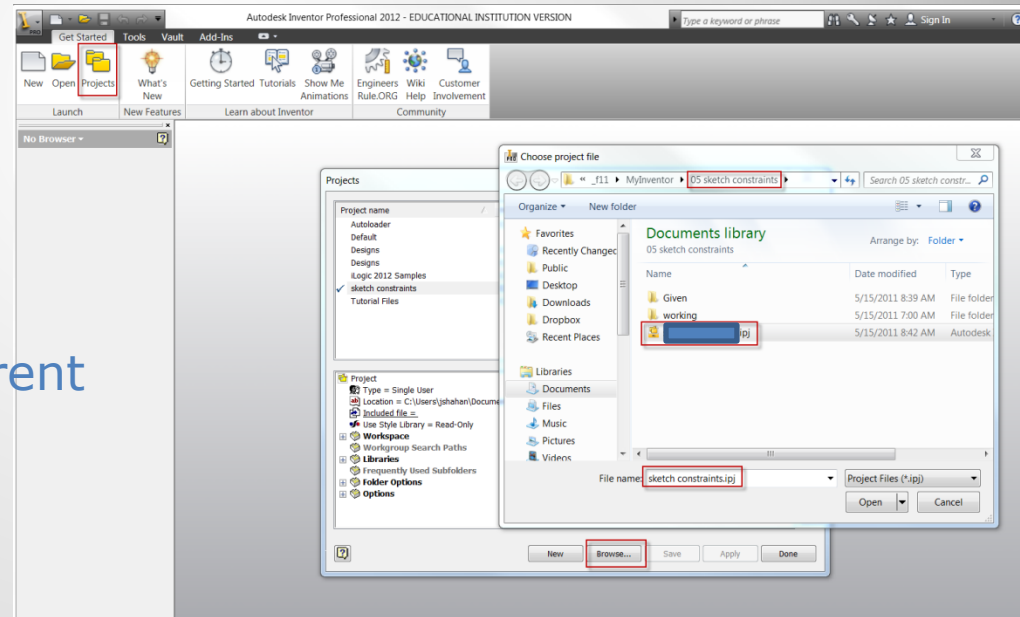


- Project Name:

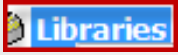


Example Project Window

- Your folders will be different

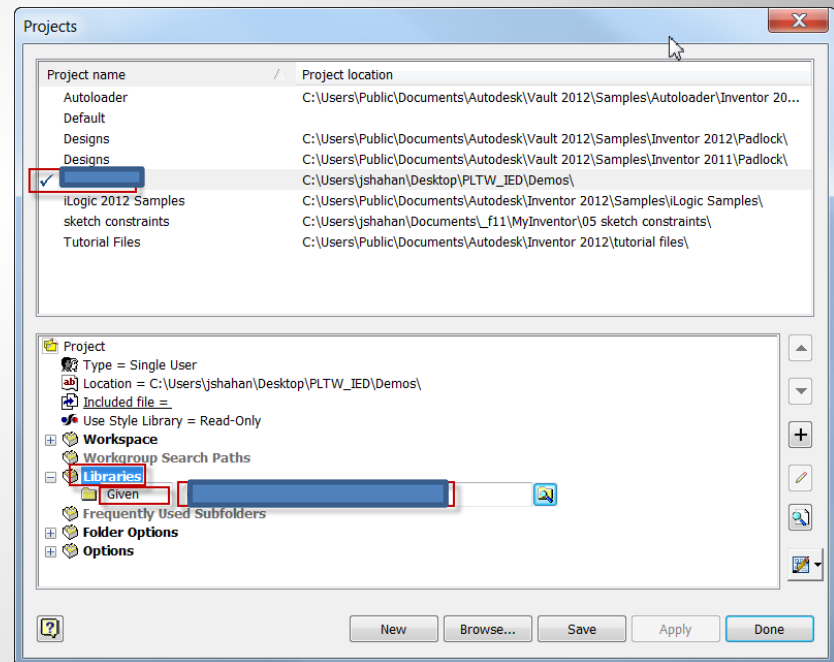


a. Startup

- Find / open
 - ...Project:
- Verify
 - ...Workspace
 - Library 

Example Project Window

- Your folders will be different



a. Inventor: Folder | Project

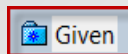
- Coincident
- Horizontal Vertical

2. 2D SKETCH CONSTRAINTS

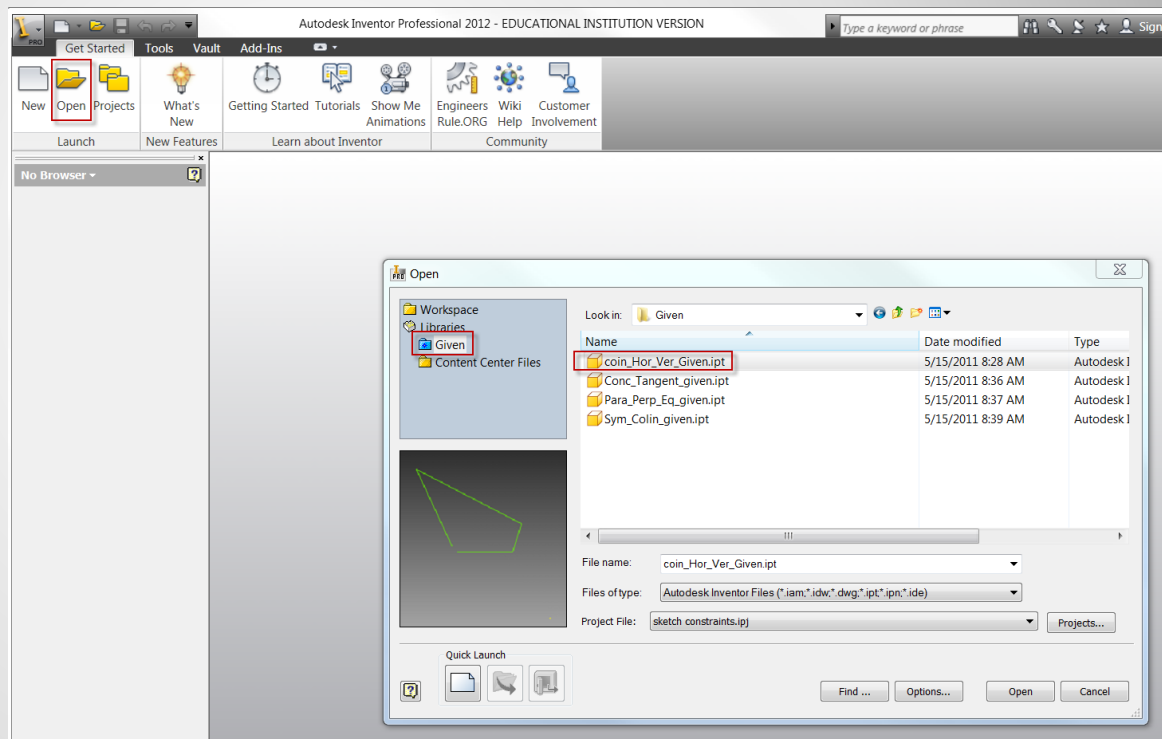
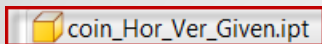
- Open



- Library:



- File:



a. Open (given file)

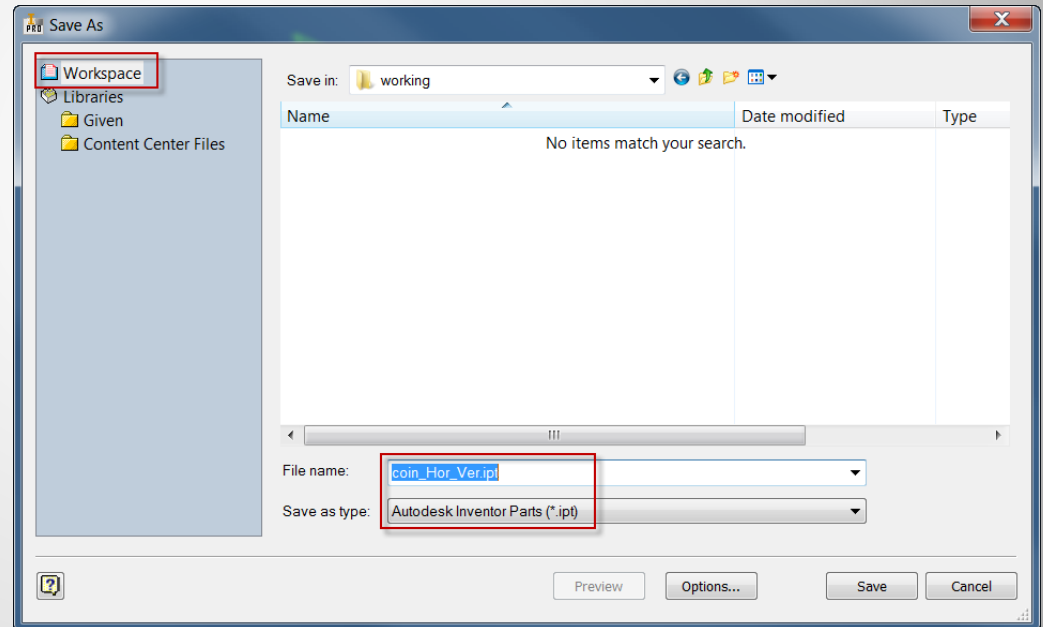
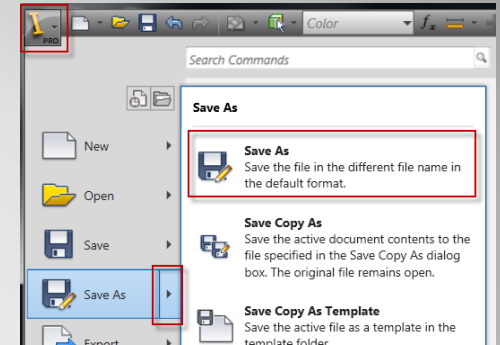
- Save-As:



Save in: Workspace

File name: coin_Hor_Ver.ipt

File type: Autodesk Inventor Parts (*.ipt)



b. Save a Copy

- Pick <LMB>

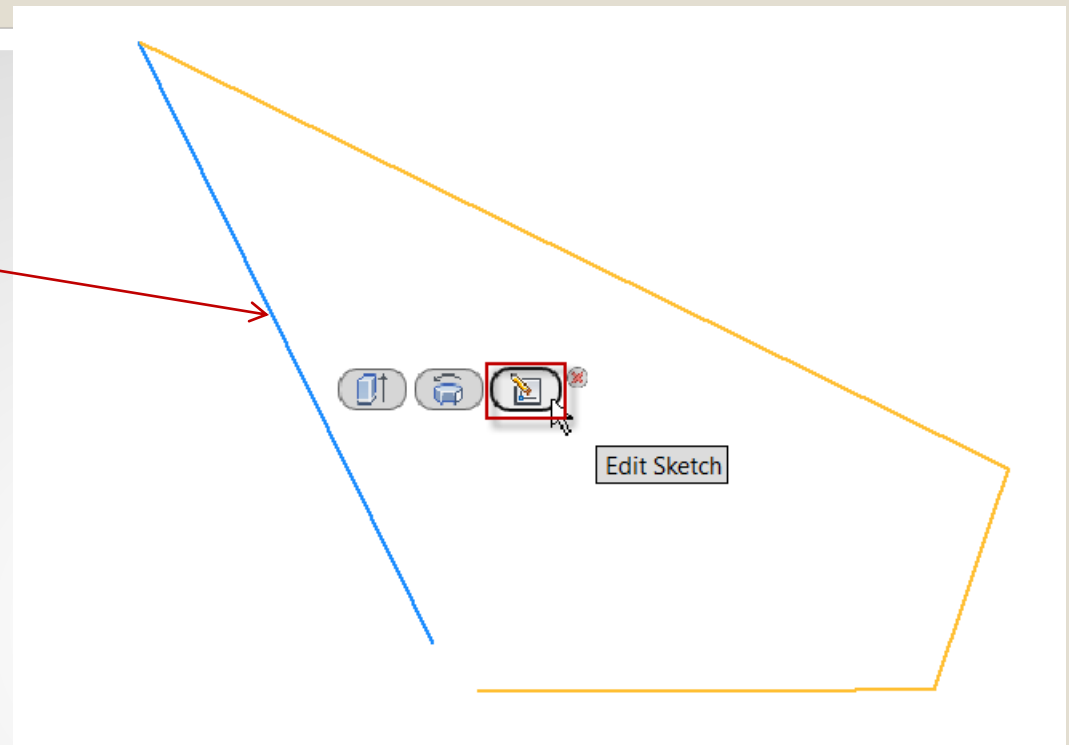
- the line

- Edit Sketch



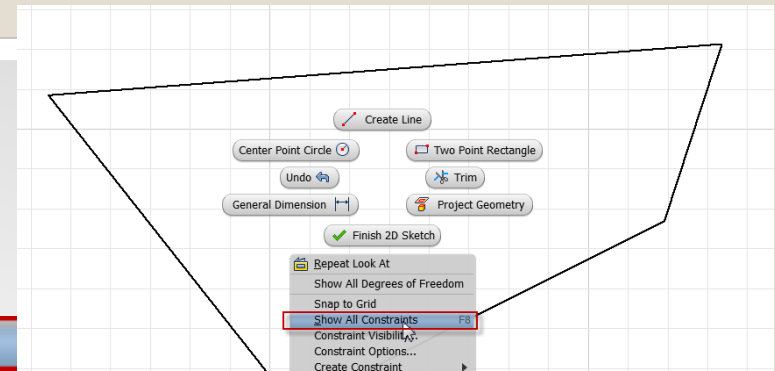
- Note: 10 dimensions needed

10 dimensions needed

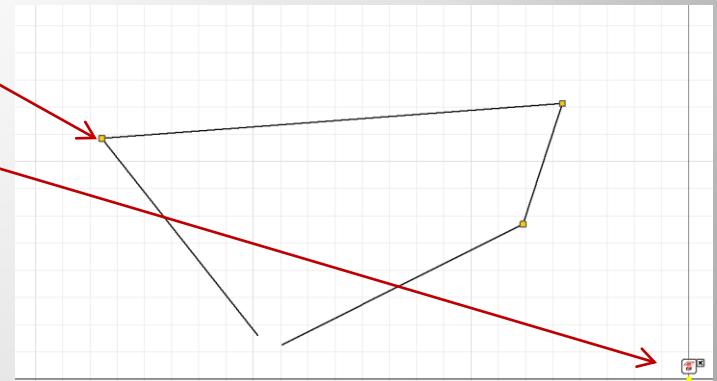


c. Edit the sketch

- De-select: <Esc> key
- Pop-up Menu: <rmb>
 - Pick <lmb>: **Show All Constraints**



- Note
 - Coincident endpoints
 - Projected Geometry



d. Show Constraints

- Pick <Imb> :

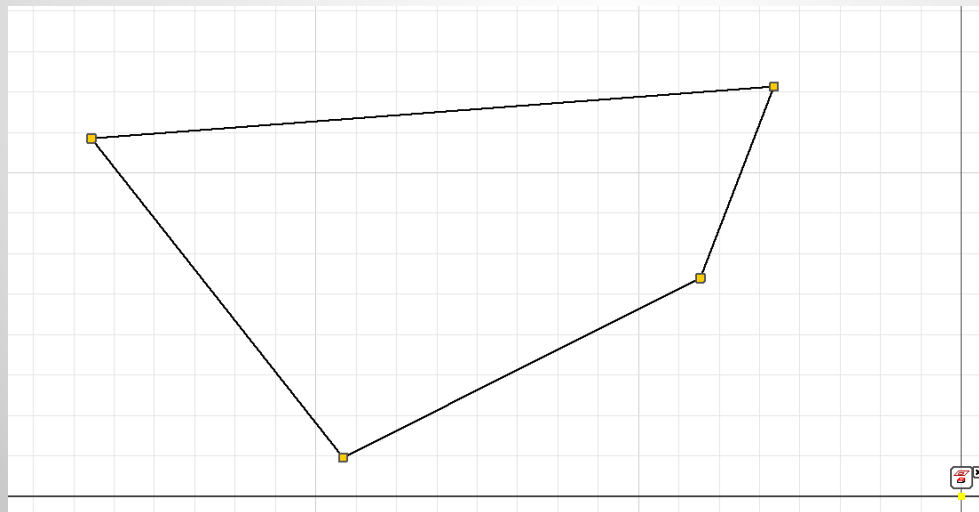
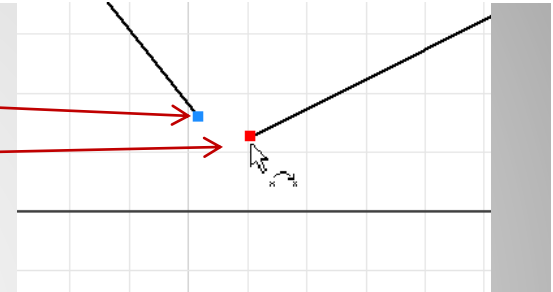
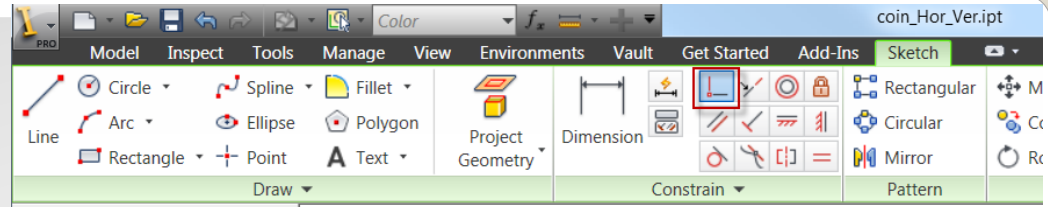
 - Coincident:



 - Endpoint - 1:

 - Endpoint - 2:


- Results:

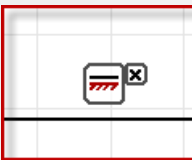


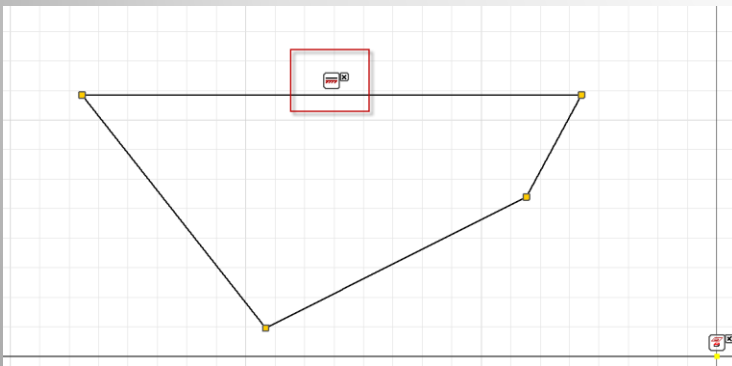
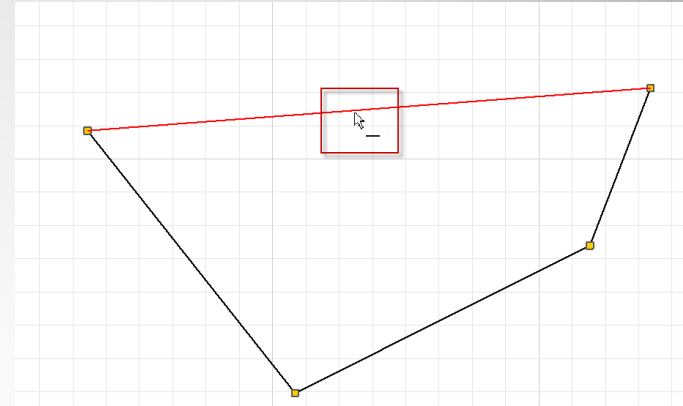
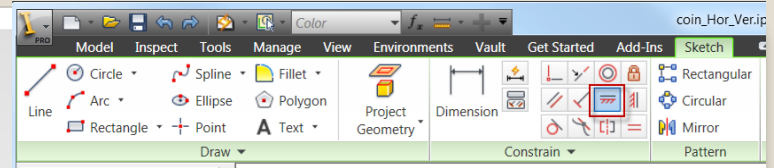
e. add coincident

- Pick <Imb>:

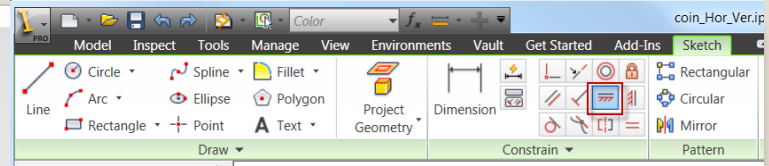
 - Horizontal: 

 - Line: 

- Verify Results: 



f. Add: horizontal line



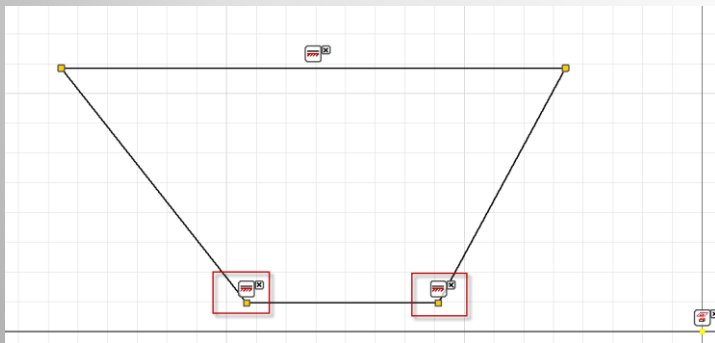
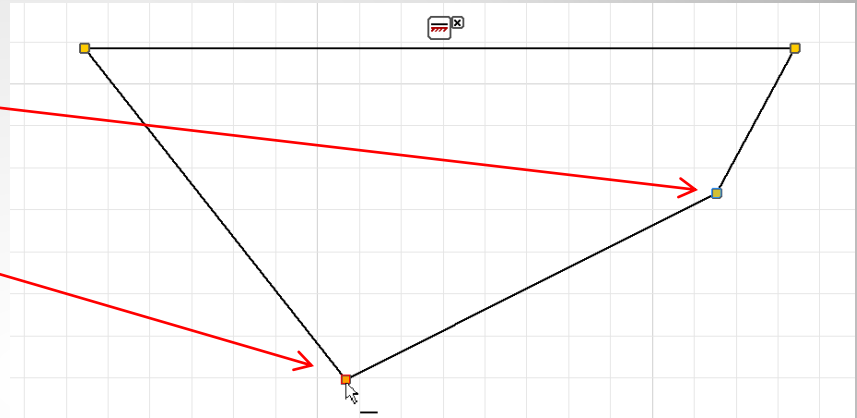
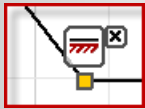
- Pick <Imb>:

- Horizontal: 

- Point 1:

- Point 2:


- Verify:

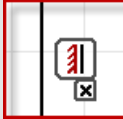


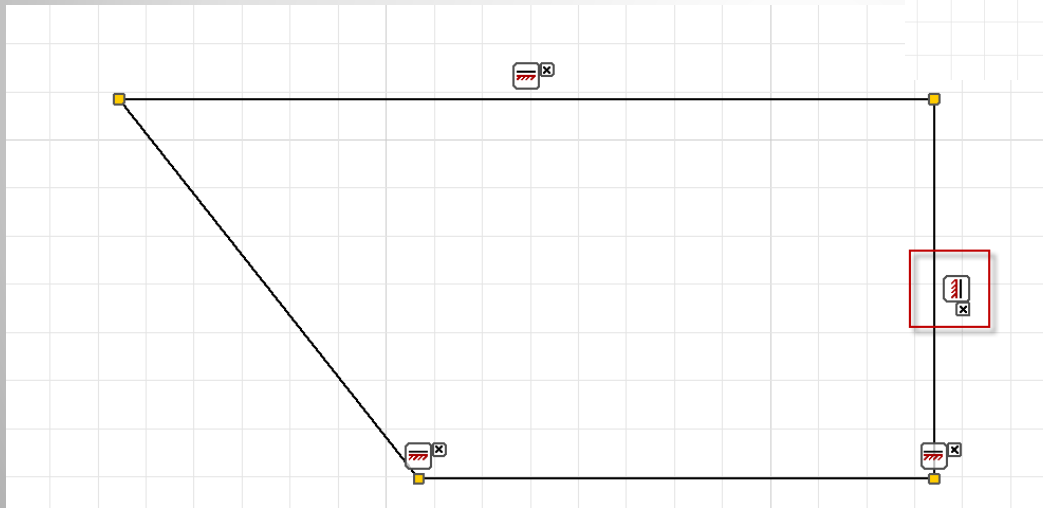
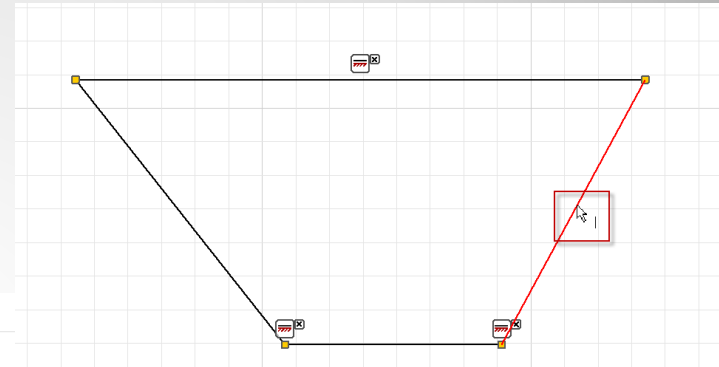
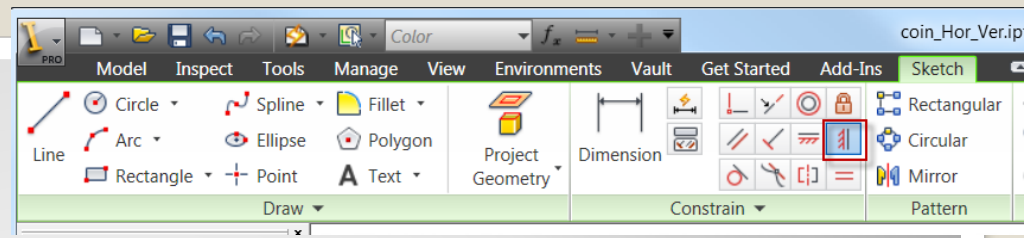
g. Add: horizontal points

- Pick <Imb> :

 - Vertical: 

 - Line: 

- Verify: 



h. Add: vertical line

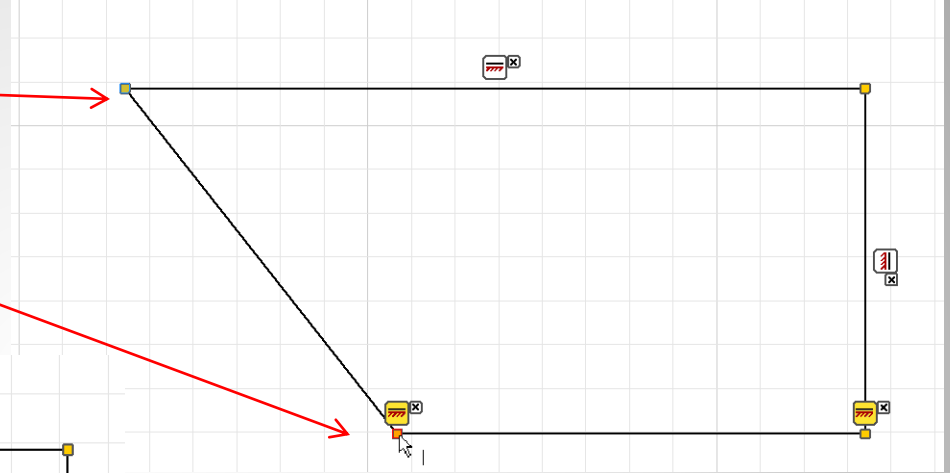
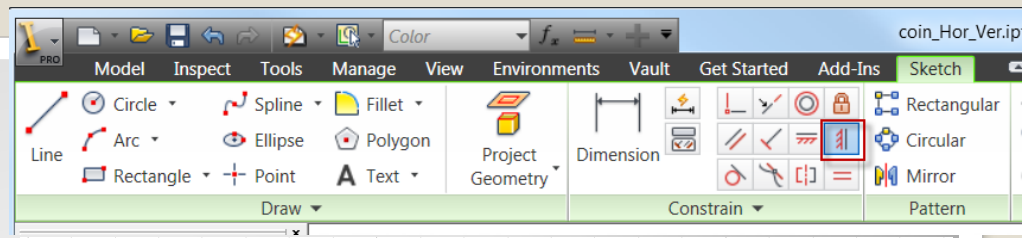
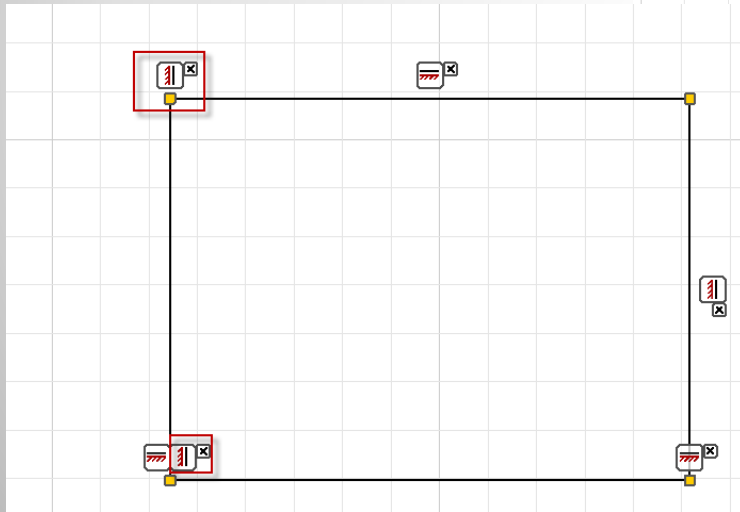
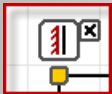
- Pick <Imb>:

- Vertical: 

- Point 1:

- Point 2:

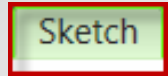
- Verify:



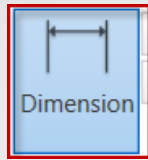
i. Add: vertical points

- Pick <Imb>:

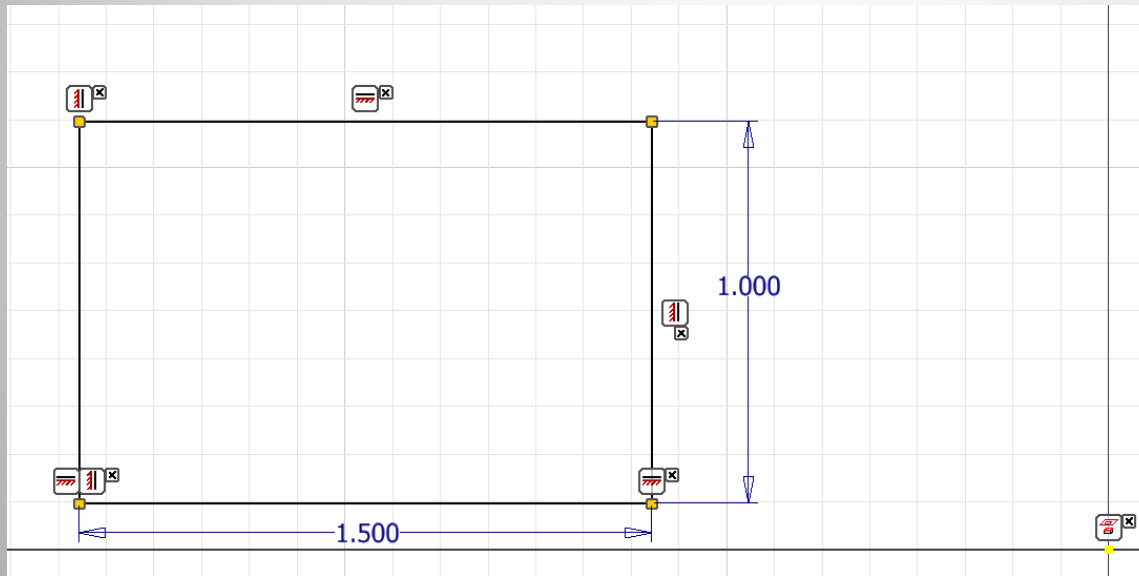
- Sketch:



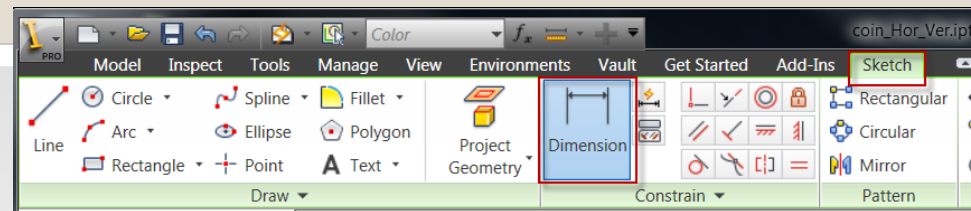
- Dimension:




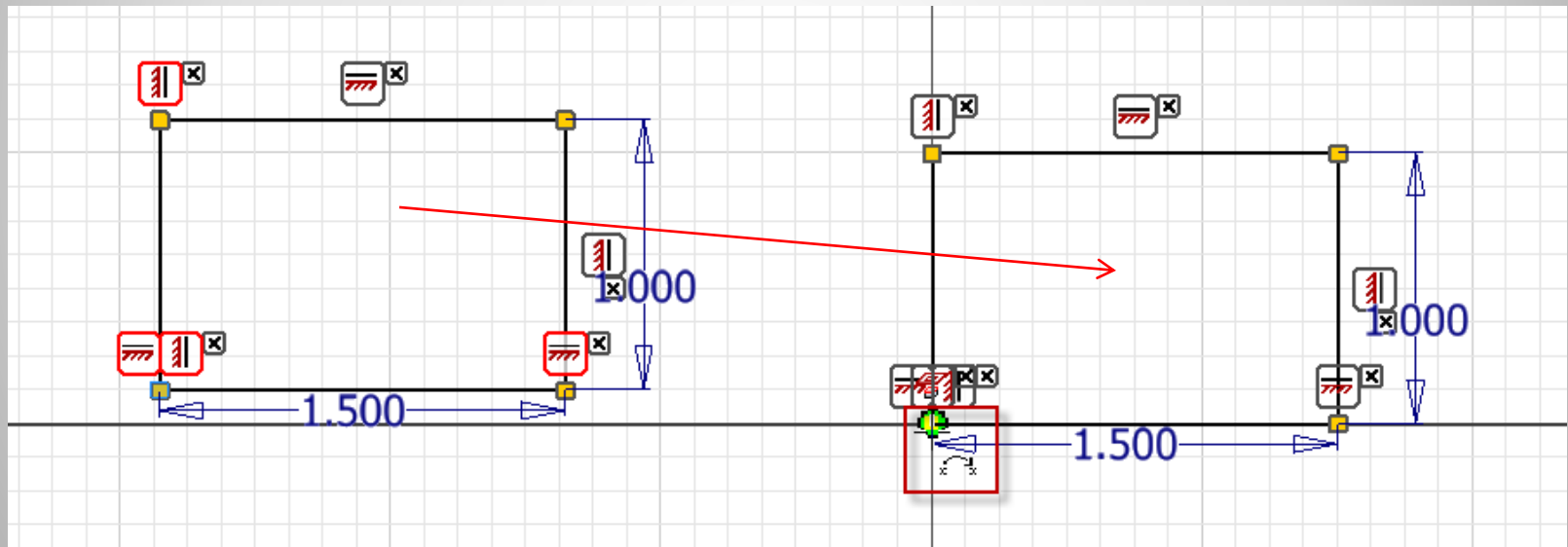
- Results:



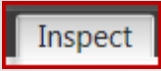


j. Dimension

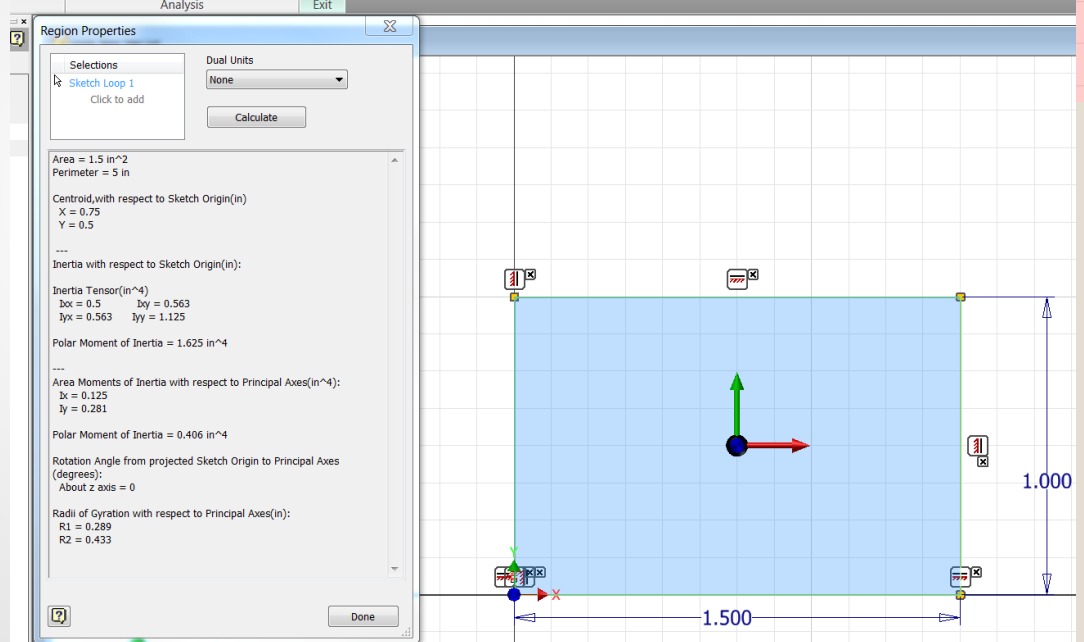
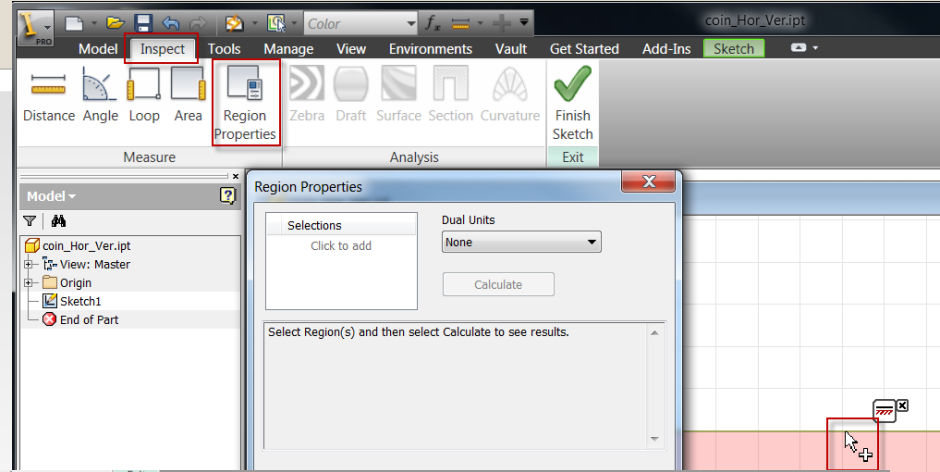


- Pick <Imb>: corner
- Drag: to origin
- Results: Coincident 
- Note:



k. Coincident - origin

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



k. Calculate region properties