

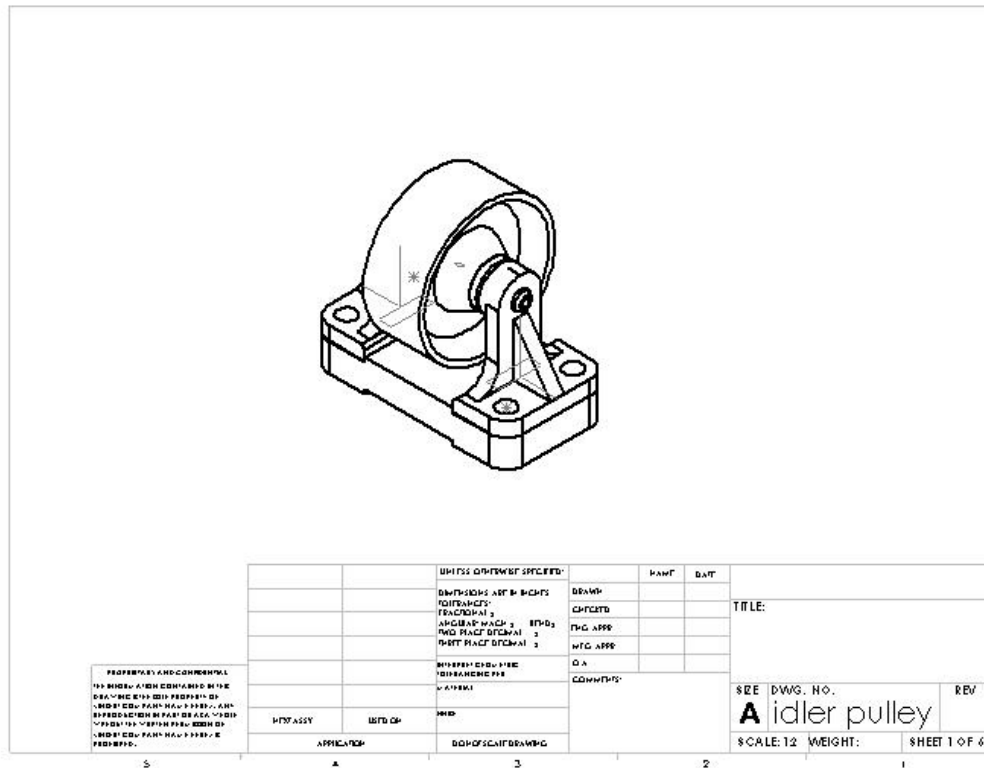
IDLER PULLEY LESSON

It is a variation of a drafting assignment from an old Mechanical drawing book. The objectives of this lesson are visualization, interpretation of drawings, planning and sequencing. This lesson is designed to test the student's ability to read and interpreting a set of drawings and to reproduce these drawings in a CAD format to prepare them for machining. The students have already been introduced to extruding, revolving and assembly drawings. This lesson is sufficiently complex to challenge the faster students and yet doable by the slower student. I encourage the student to help each other out, The faster student learn more helping and the slower student need the help.

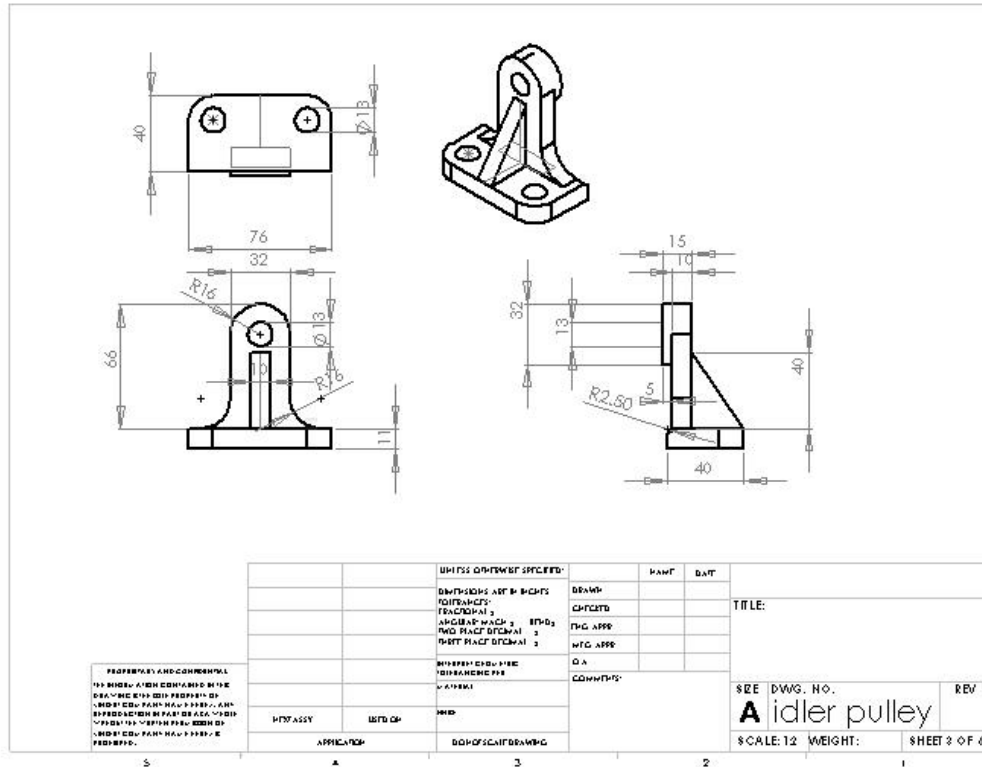
Lesson requirements are:

1. Complete a file for individual part, base plate, support bracket, shaft, bushing and pulley.
2. Complete an assembly drawing.
3. Complete and a final set of final drawings.

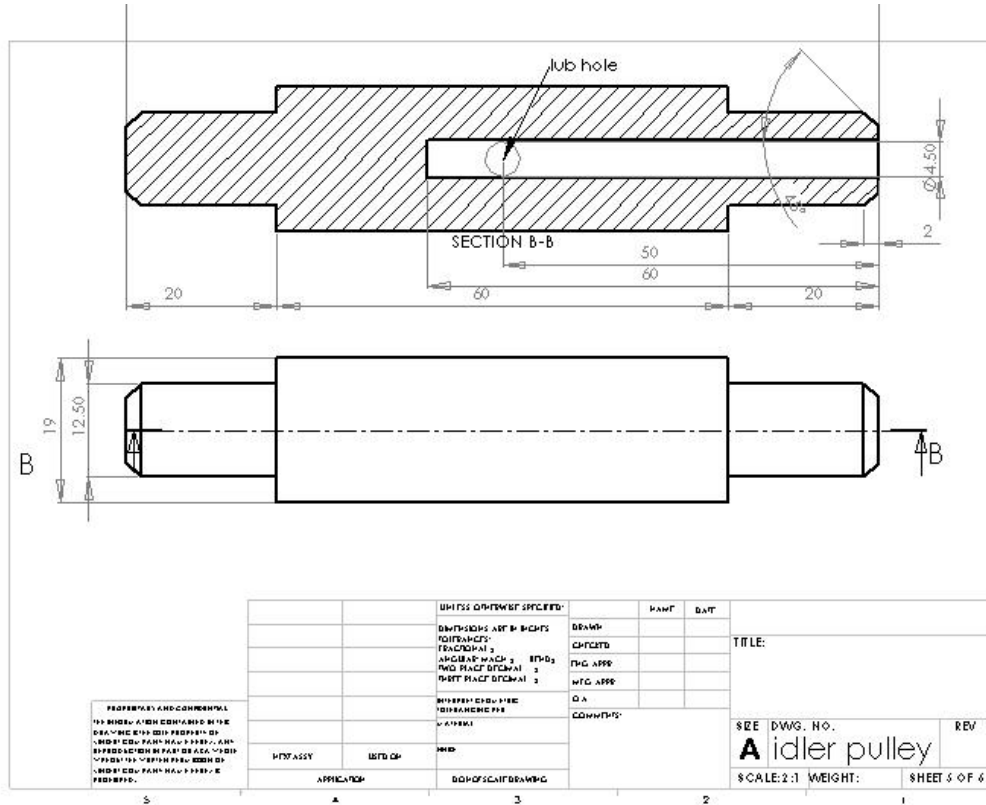
Look at the final assembly before you start. Develop a plan, what part do you draw first. What part is next, etc. Visualize what the function of this part is. What is it intended to do? What is the function of an idler pulley?



I choose to the pulley support bracket next because it will mate to the base plate. You may choose a different, simpler part next, it is your choice. The support bracket will require several extrusions and cuts. This is a complicated part, it is very important to plan your sequence before you start. Remember there are 2 brackets, they are the same, so you need only draw one.



The shaft will require several extrusions and cuts. Observe the two lubrication holes, one down the center of the shaft and the lub hole from the center hole out. Forget the last and it will not lubricate. The chamfer is not there for looks. It is much easier to assemble the part if the end is chamfered.



The pulley looks alot more complicated than it really is. It is a simple revolve problem. Draw the cross section and revolve. Watch your dimensions, start in the middle and work you self out.

