Inventor Assignment #4

Reading Assignment:
Read Chapters 3, 4, and 10 in Parametric Modeling with Autodesk Inventor 2013, by Randy Shih

Computer Assignment:
Create a solid model (a part) of the driveshaft shown on the following page. Also produce a drawing with front, right, and isometric views as shown. Specifically:
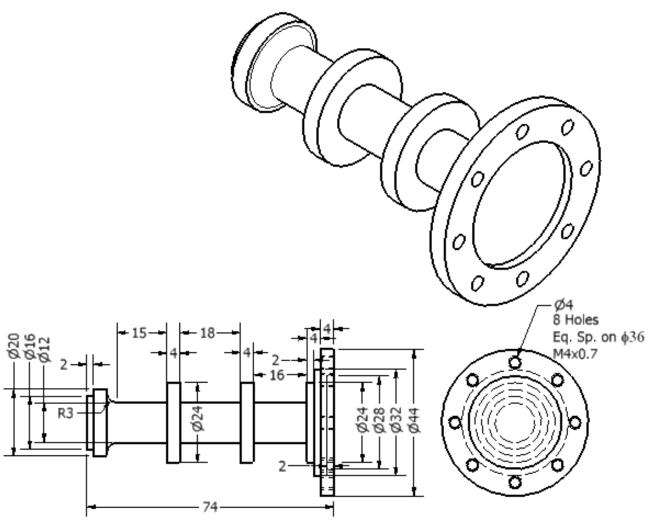
- Create a new standard (mm) part.
- Since the driveshaft will be created as a revolved feature, begin by drawing a centerline.
- Draw the profile of the driveshaft.
- Add the linear dimensions for the length of the shaft and the **linear diametric dimensions** showing the diameter for each portion of the shaft.
- Revolve the profile to create the driveshaft.
- Add one threaded hole (use a 2D sketch to locate its center first).
- Use the circular pattern tool to create the remaining holes.
- Create the drawing file (ANSI(mm).idw)
- Select an A-size (portrait) sheet.
- Use the Styles Editor to change the number of digits after the decimal point to 0.
- Retrieve dimensions from the part. Add new dimensions if any are missing (include all dimensions shown on the following page.)
- Use good dimensioning style (see below)
- Add the note for the threaded holes.
- Add the word METRIC to the drawing.
- Add information to the title block including
    - Your name
    - EGR 110 – Engineering Graphics
    - Part Description: Driveshaft
    - Date
    - Scale: 1=1
    - Inventor Assignment #4
- Print the drawing.

Dimensioning style
Good style in dimensioning will be covered in detail a little later in the course, but for now a few useful rules are presented below:

- Keep dimensions aligned as much as possible
- Neatly space the dimensions
- Avoid inside dimensions
- Avoid driven (redundant) dimensions
- Center the dimension text within the extension lines
- Specify diameter (using φ) for holes and radius (using R) for arcs
- Label views (neatly centered under each view)
- Always include the scale for the drawing
- Use centerlines where appropriate

Ø20
Ø16
Ø12

2

R3

15

4

18

4

Ø24

4

4

2

16

Ø24
Ø28
Ø32
Ø44

2

74

Ø4
8 Holes
Eq. Sp. on φ36
M4x0.7

Metric