Lecture ٨

Dimensions
Layers
Printer Settings

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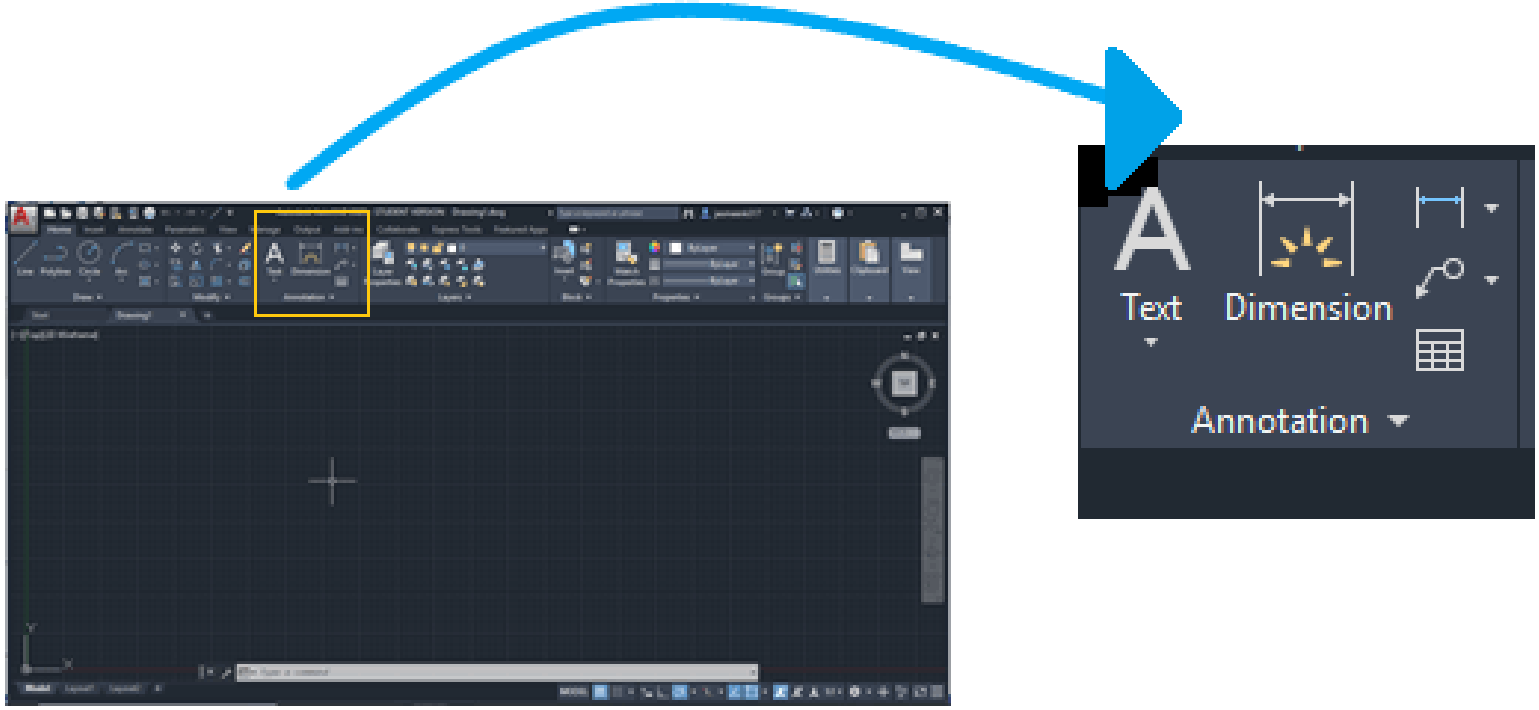
Dimensions

It is used to display the dimensions of drawings or models in AutoCAD. We can modify the dimensions in different drawing units according to the requirements.

The dimension area on the ribbon panel will look like the below image:



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There are different types of dimensions. It will appear on the drop-down list of the dimension, as shown in the below image:

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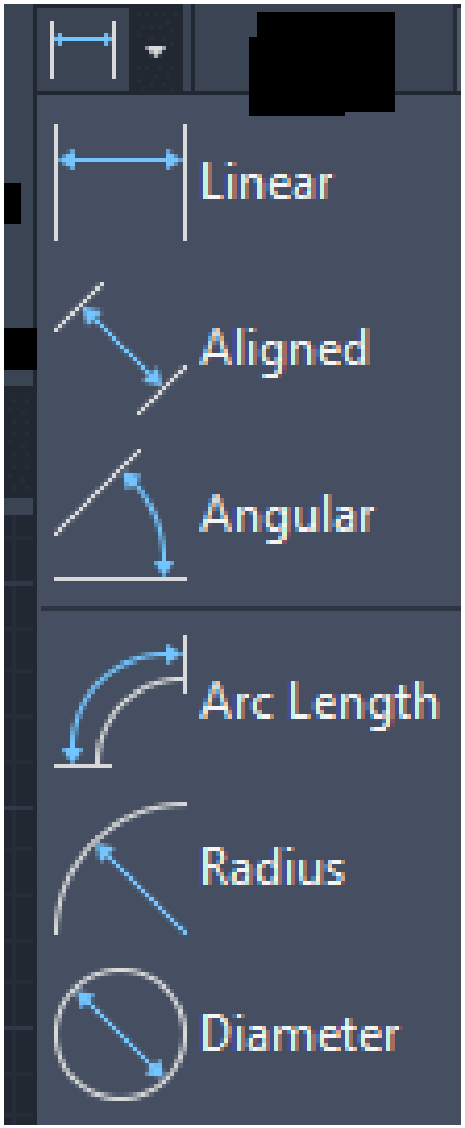

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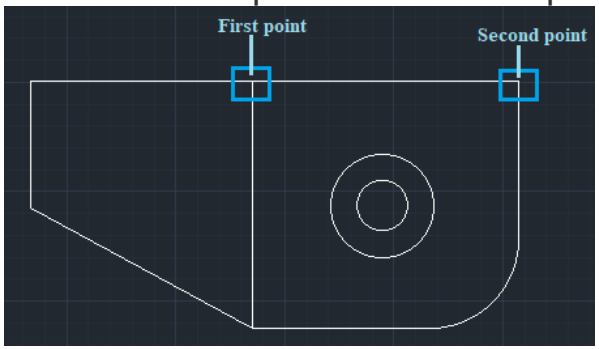
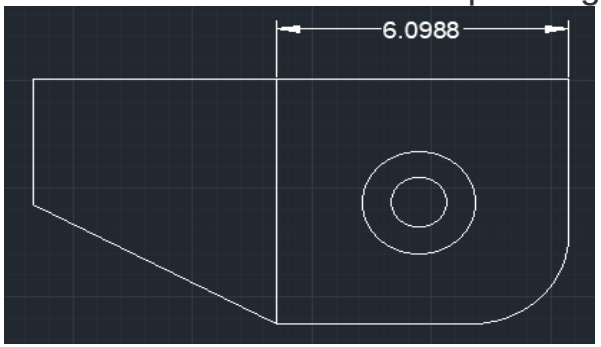
Linear Dimension

A linear dimension will give us the horizontal or vertical distance between the selected points.
Let's measure the linear dimensions of the above figure.
The steps are listed below:

١. Select the **Linear** icon from the ribbon panel.
   Or
   Type **DLI** or **DIMLINEAR** on the command line and press **Enter**.
٢. Select the first point and second point of a line to be measured, as shown below:



٣. The dimension of the corresponding line will be displayed, as shown below:



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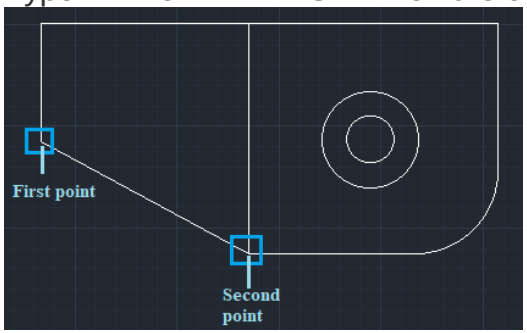
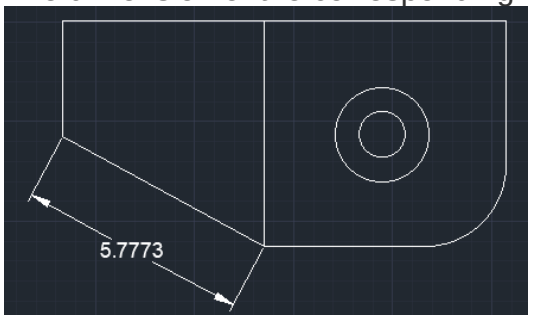
Aligned Dimension

The aligned dimension will give us the exact distance between the two selected points or endpoints. It is commonly used to measure the slanted lines.
The dimensions will be parallel to the created slanted line.
Let's measure the aligned dimensions of the above figure.
The steps are listed below:

١. Select the **Aligned** icon from the ribbon panel.
Or
Type **DAL** or **DIMALIGNED** on the command line and press **Enter**.



٢.
٣. The dimension of the corresponding line will be displayed, as shown below:



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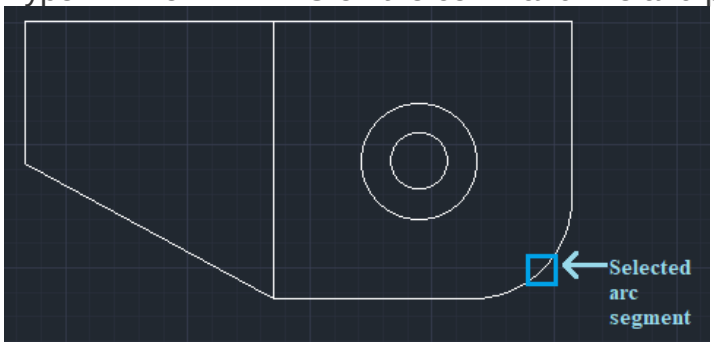
Arc Length Dimension

The arc dimension measures the distance along an arc or polyline arc segment. The symbol of the arc is displayed either above or before the dimension value.

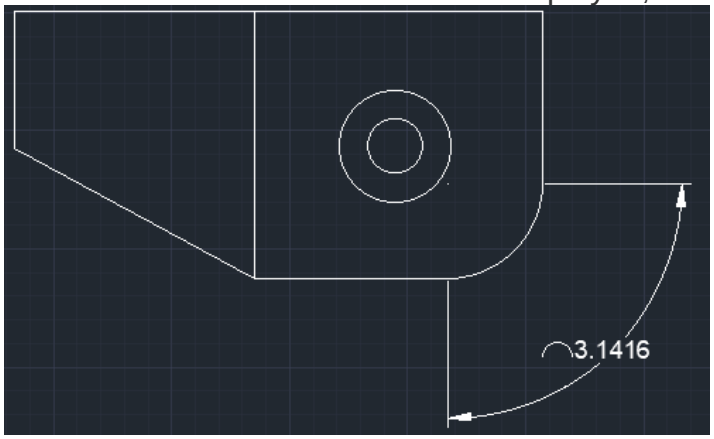
Let's measure the Arc Length dimensions of the arc in the above figure.

The steps are listed below:

١. Select the **Arc Length** icon from the ribbon panel.
Or
Type **DAR** or **DIMARC** on the command line and press **Enter**.



٢. The value of the arc chosen will be displayed, as shown in the below image:



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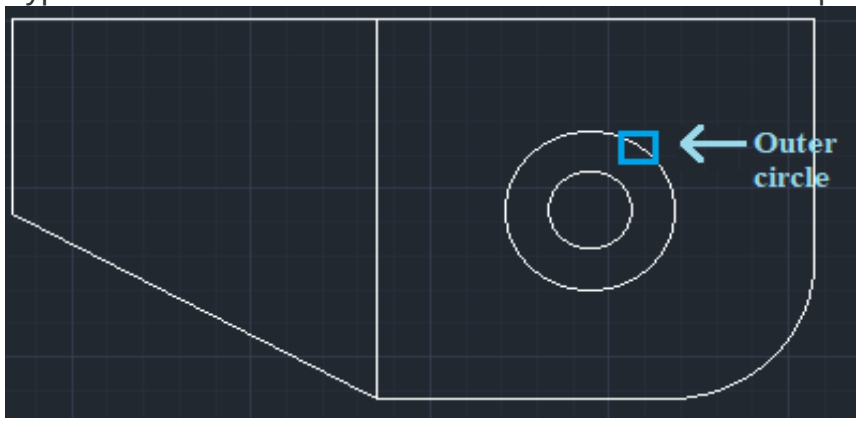
Radius Dimension

The radius dimension will measure the radius of the selected circle or arc. It displays the radius symbol before the dimensioning text.

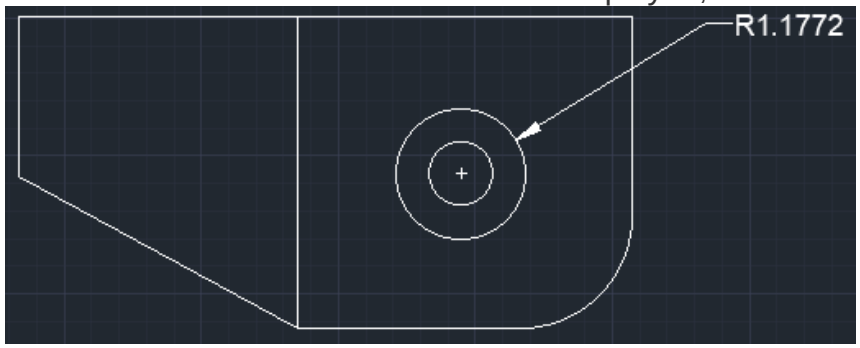
Let's measure the Radius dimensions of the circle in the above figure.

The steps are listed below:

١. Select the **Radius** icon from the ribbon panel.
Or
Type **DIMRAD** or **DIMRADIUS** on the command line and press **Enter**.



٢. The radius of the selected circle will be displayed, as shown in the below image:



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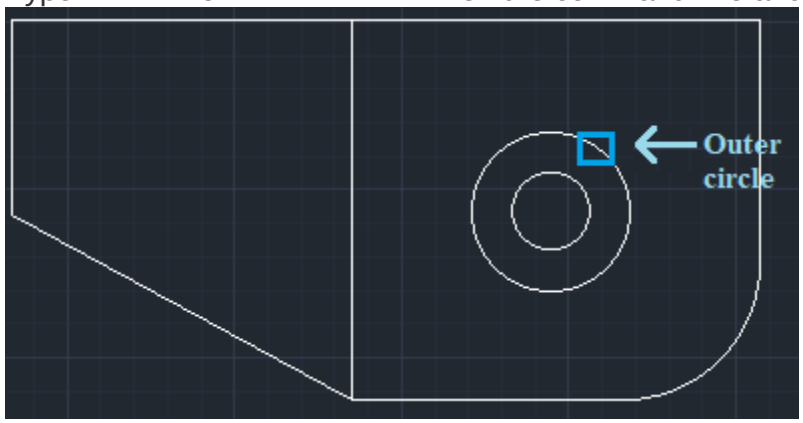
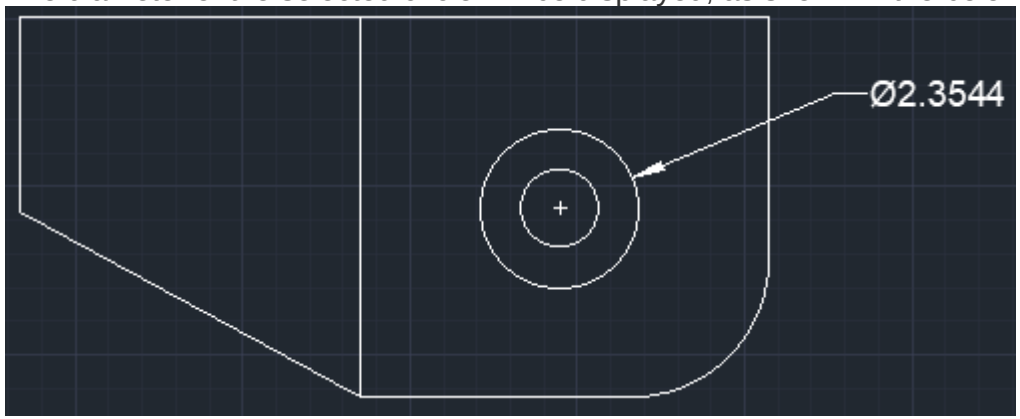
- **Diameter Dimension**
  The diameter dimension will give us the diameter of the selected circle.

١. Select the **Diameter** icon from the ribbon panel.
Or
Type **DIMDIA** or **DIMDIAMETER** on the command line and press **Enter**.



٢. The diameter of the selected circle will be displayed, as shown in the below image:



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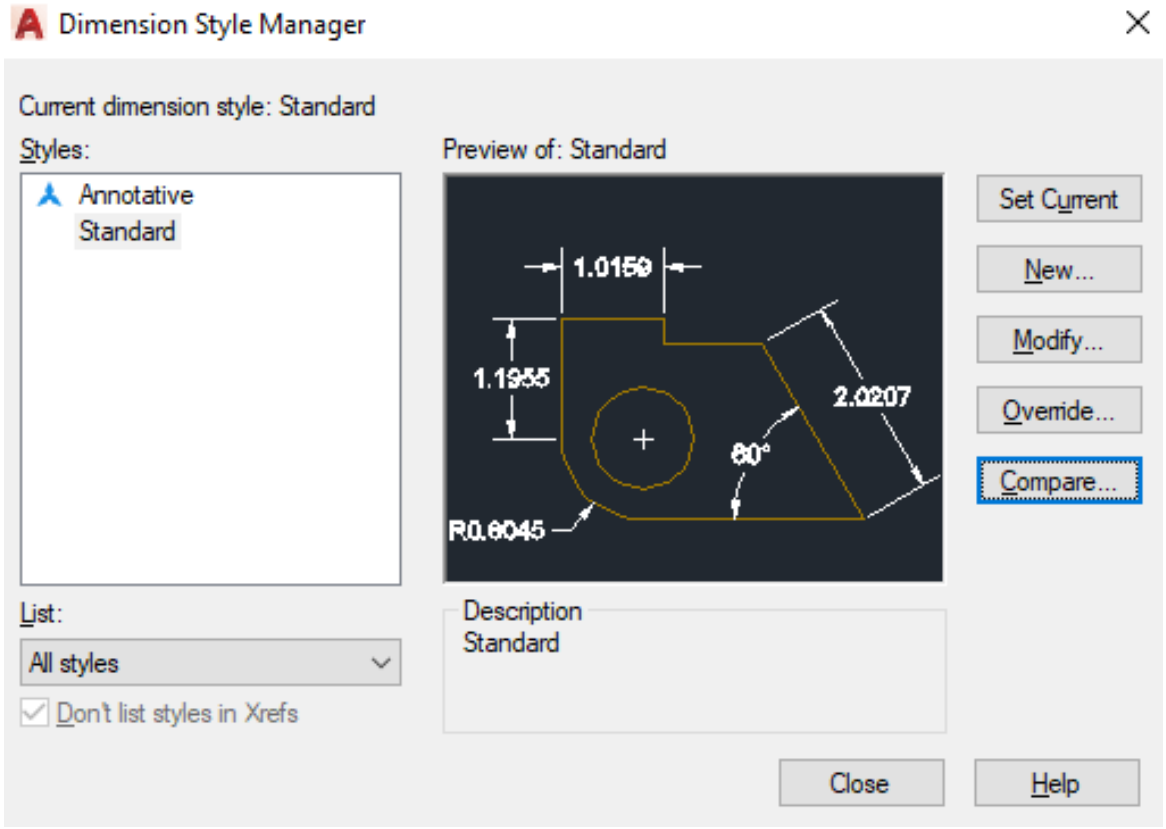
Dimension Style Manager

The Dimension Style Manager is used to create,modify, override, and compare the new styles and dimensions in AutoCAD.
The **Standard** dimension style is considered as the default dimension style.
To open the Dimension Style Manager,

- Type **D** or **DIMSTY** on the command line or command prompt and press **Enter**.

The dialog box will appear, as shown below:



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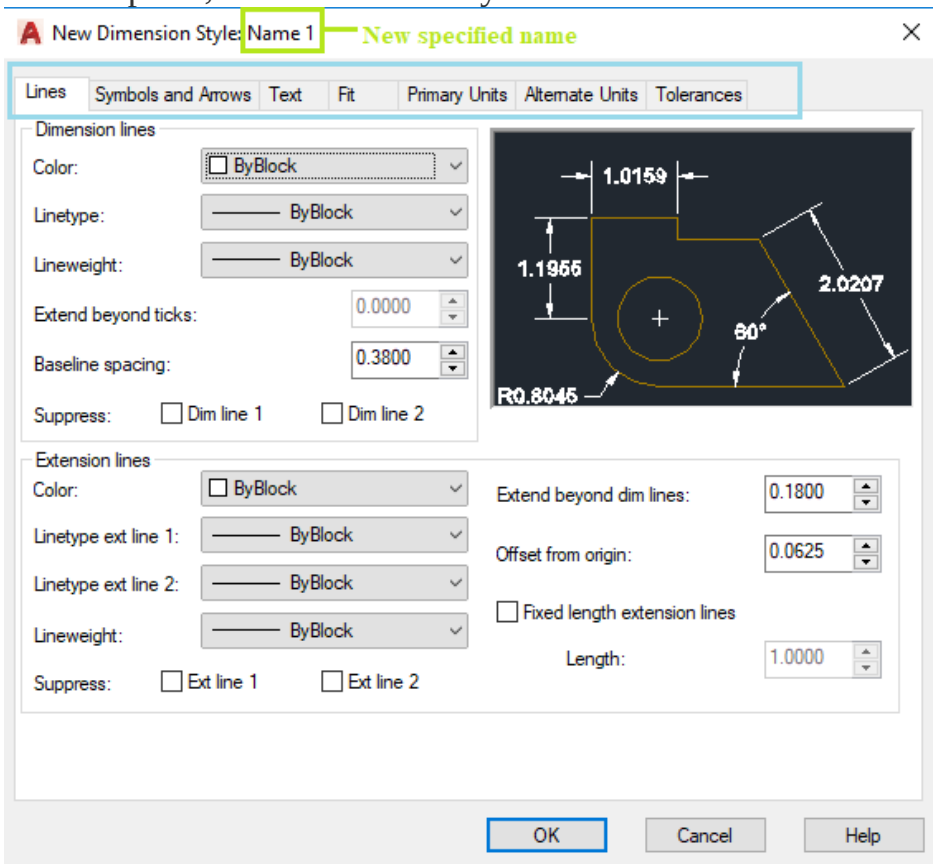
- **Modify**

The **modify** option will open the modification dialog box, which is the same as the New Dimension Style dialog box. Here, we can modify the different characteristics of dimensions, according to the requirements.

- To modify the size of the arrow,

Click on the **'Symbols and Arrows'** option, which will modify the value below the **Arrow size**, as shown below:



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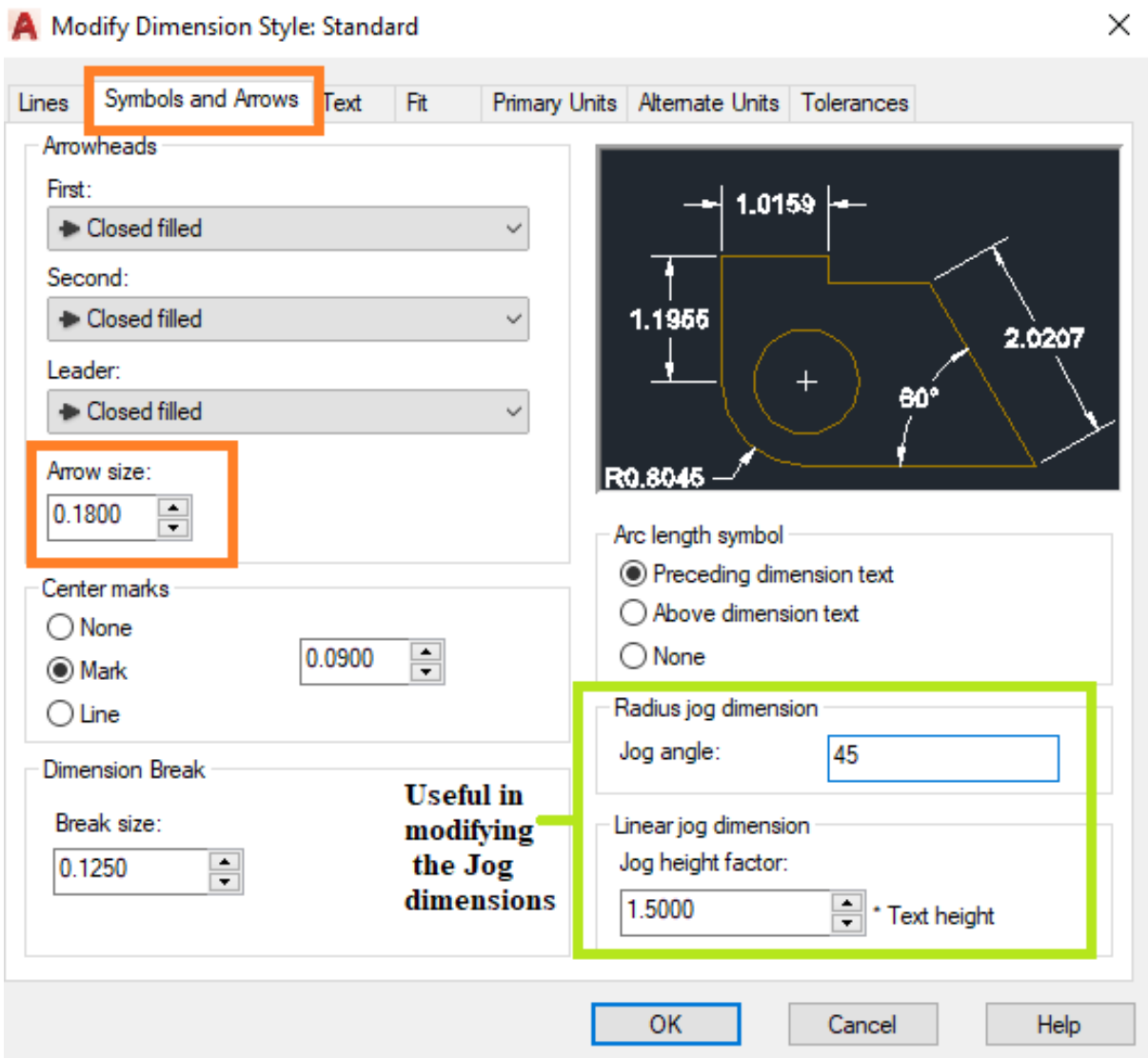

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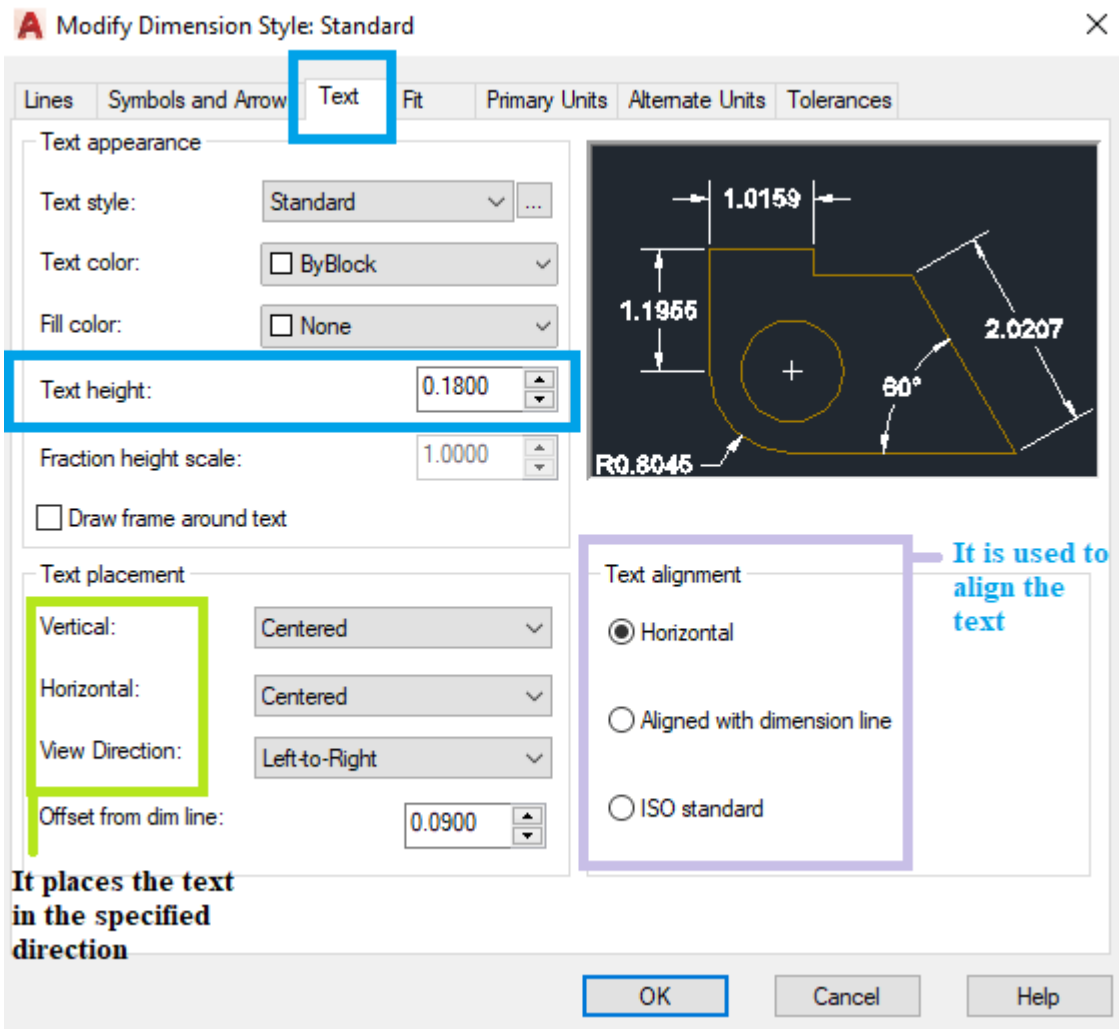
Click on the '**Text**' option and modify the value in front of the **Text Height**, as shown below:



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Layers

The way to gain complete layer control is through the layer Properties Manager.

Command Line	Layers or la ↵
Tool Bar	Format → Layers
Draw Bar	

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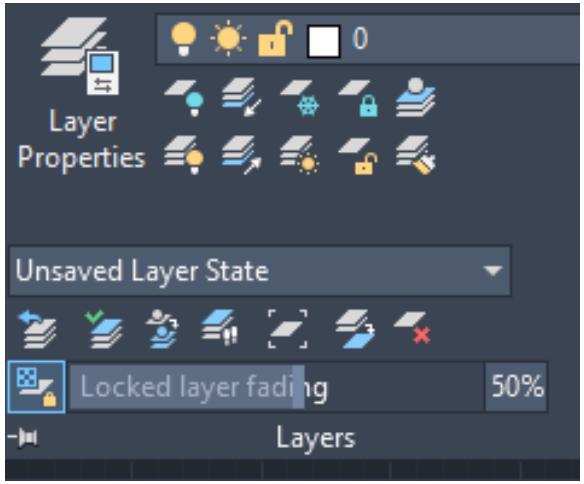
Layers

- The **layer** command is used to control and manage the drawings in AutoCAD for different purposes.
- It increases the display performance of the AutoCAD by hiding the portion of our drawing when needed. It also improves the visual complexity of the drawing.
- We are required to create a set of layers having different properties. For example, in a floor plan or house plan, we can create separate layers for doors, walls, etc.
- We can create many layers by specifying the name for the corresponding layer. We can also control the order of the layers.
- The shortcut command of the layer is **'LA'**.
- The Layer on the ribbon panel looks like the below image:



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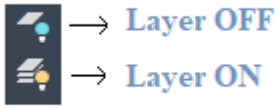
- **Layer ON/OFF**

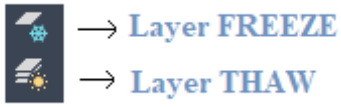
It is used to turn **ON** or turn **OFF** the layer of the selected object.



The shortcut command for the Layer ON and Layer OFF is **LayON** and **LayOFF**.

- **Layer Freeze/Thaw**

The FREEZE is used to freeze the layer of the selected object, while the THAW is used to remove the freeze from the layer.

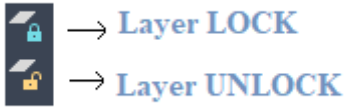


The objects become invisible after applying the LAYER FREEZE command.

- **Layer LOCK/UNLOCK**

The LOCK is used to lock the layer of the selected object, while UNLOCK removes the lock from the layer.

The layer is represented as:



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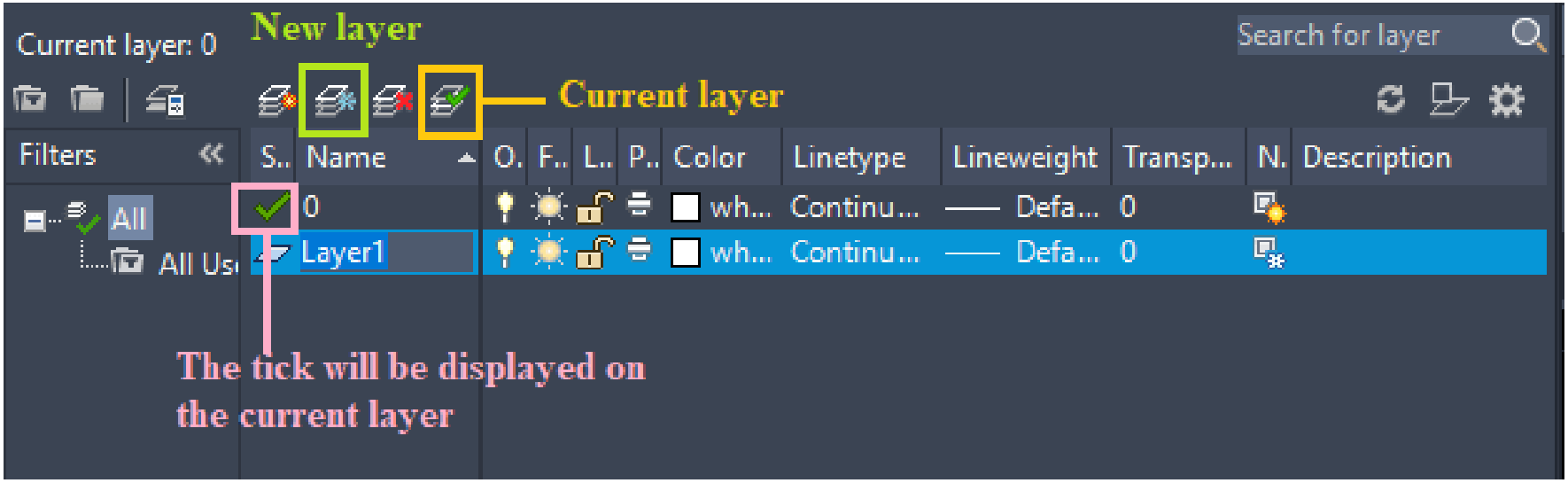
- Type **LA** on the command line < press **Enter**.
- A dialog box will appear.
- Click on the New Layer icon on the top of the dialog box.
- A new layer will appear, as shown below:



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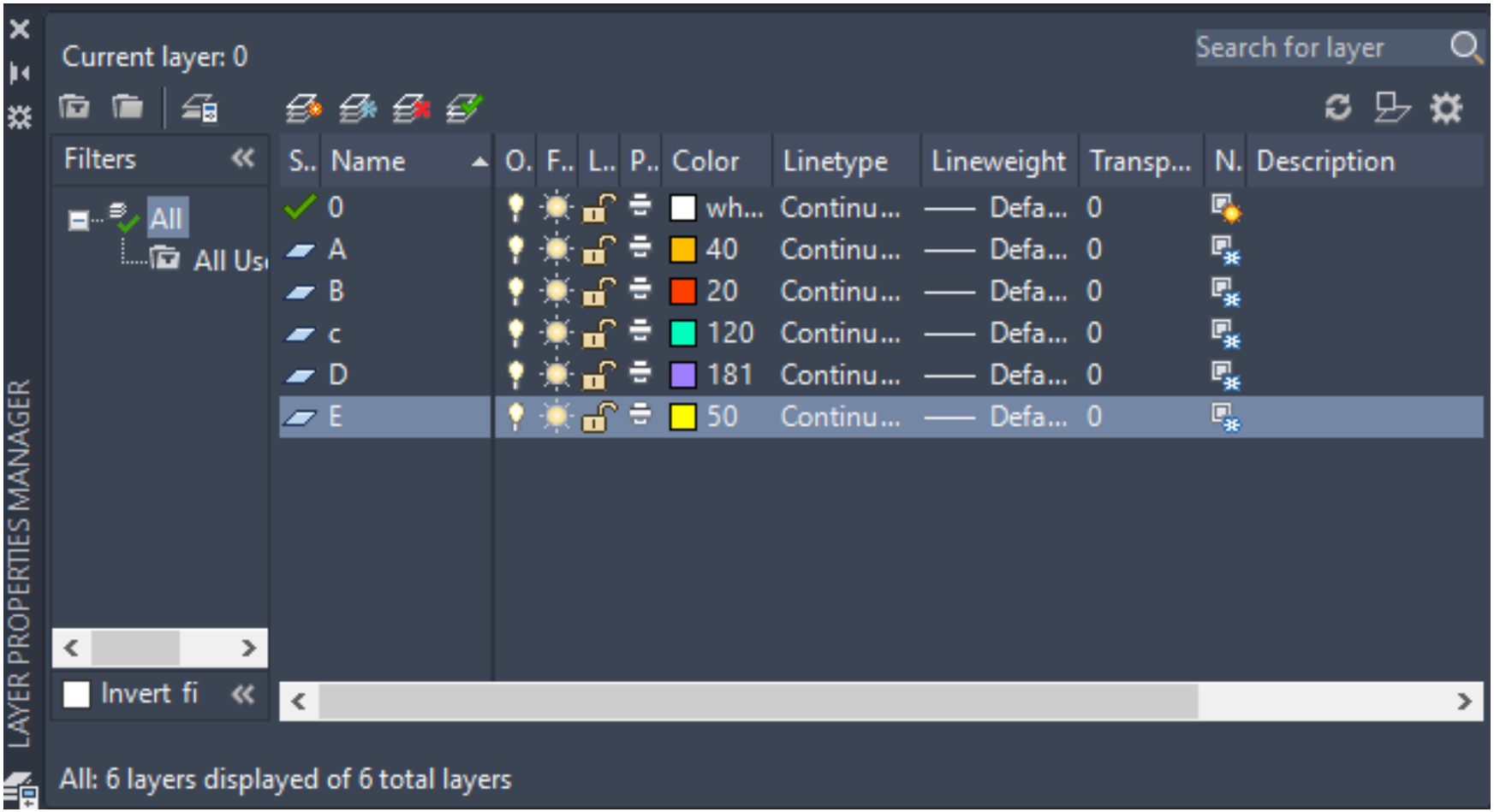
create total ٦ layers. It is shown below:



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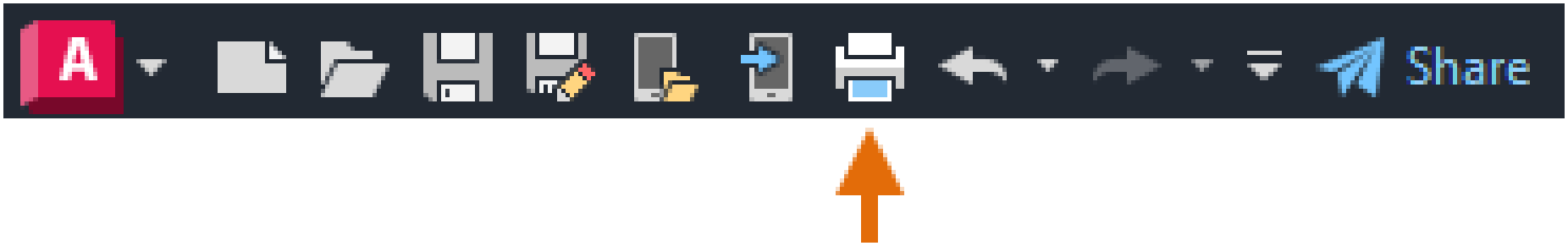
Print

Output a drawing layout to a printer, a plotter, or a file. Save and restore the printer settings for each layout.

Originally, people *printed* text from printers and *plotted* drawings from plotters. Now, you can do both with either. So this guide will also use the terms print and plot interchangeably as everyone else does.

The command to output a drawing is PLOT and you can access it from the Quick Access toolbar.



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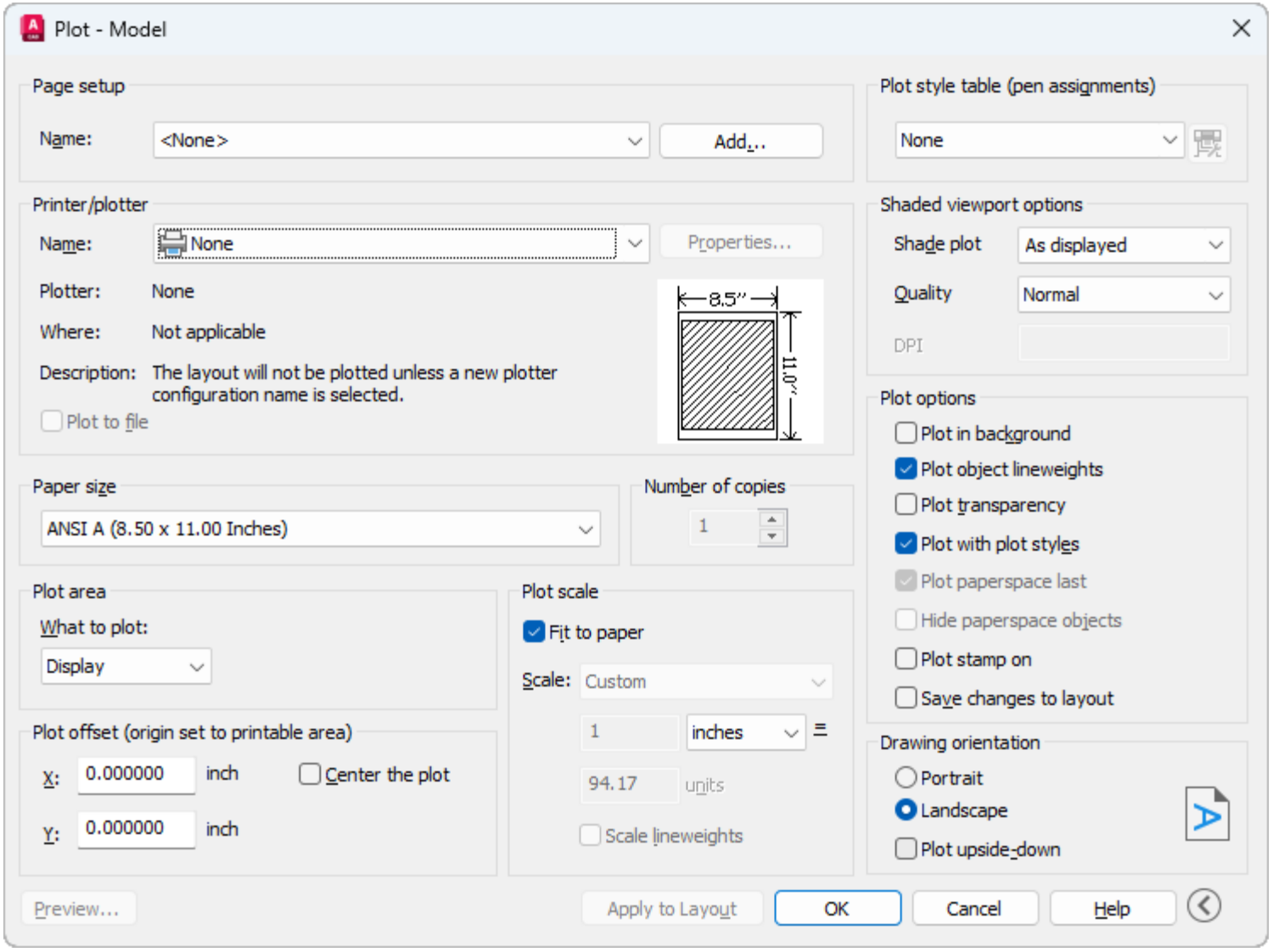

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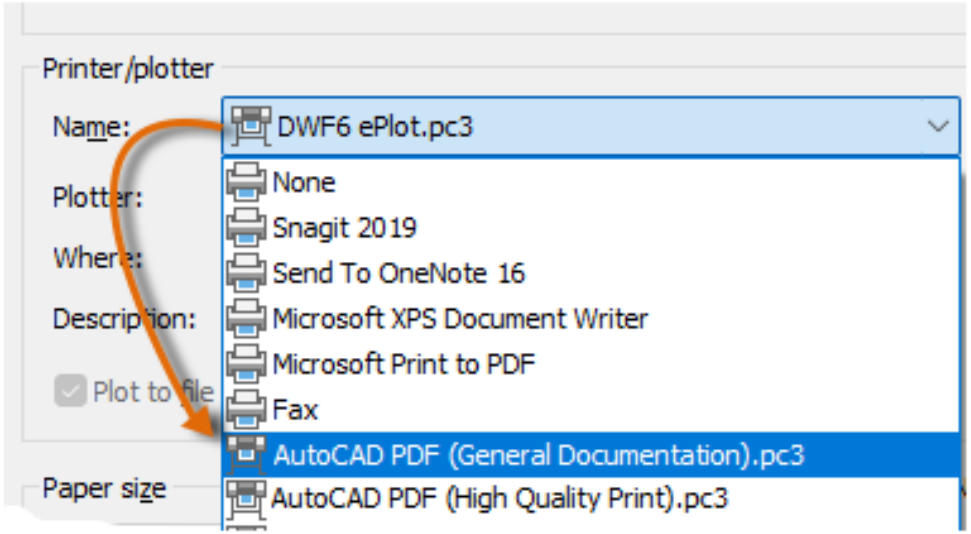
Output to a PDF File

The following example shows you how to create a page setup for creating PDF files.
From the Printer/plotter drop-down list, choose *AutoCAD PDF (General Documentation).pc٣*:



Next, choose the size and scale options that you want to use:
Paper Size. The orientation (portrait or landscape) is built into the choices in the drop-down list.
Plot Area. You can clip the area to be plotted with these options, but usually you plot everything.
Plot Offset. This setting changes based on your printer, plotter, or other output. Try centering the plot or adjusting the origin, but remember that printers and plotters have a built-in margin around the edges.
Plot Scale. Choose your plot scale from the drop-down list. A scale such as ١/٤" = ١'-٠" is meant for printing to scale from the Model tab. On a layout tab, you normally print at a ١:١ scale.

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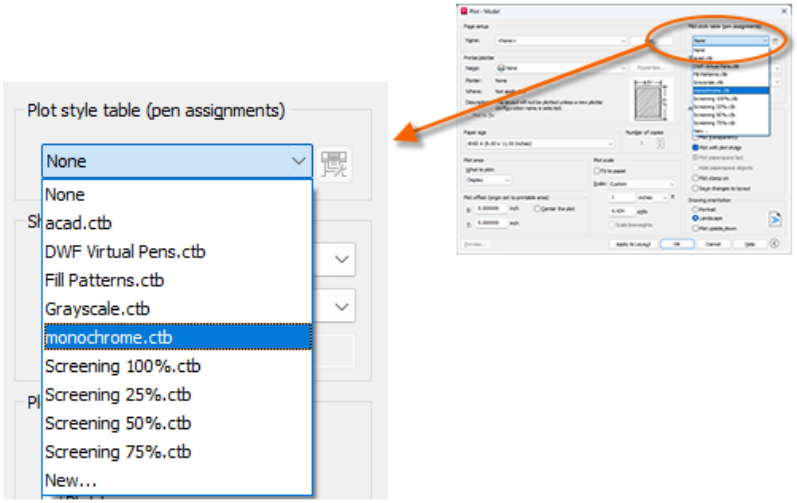
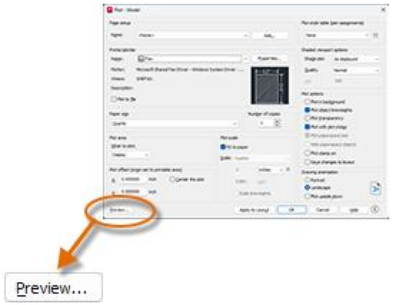
The plot style table provides information about processing colors. Colors that look good on your monitor might not be suitable for a PDF file or for printing. For example, you might want to create a drawing in color, but create monochrome output. Here is how you specify monochrome output:



Tip: Always double-check your settings with the Preview option.



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