Plateia
by CGS Labs

Generate points along axis

Tutorial

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Generate points along axis

Title: **Generate points along axis**

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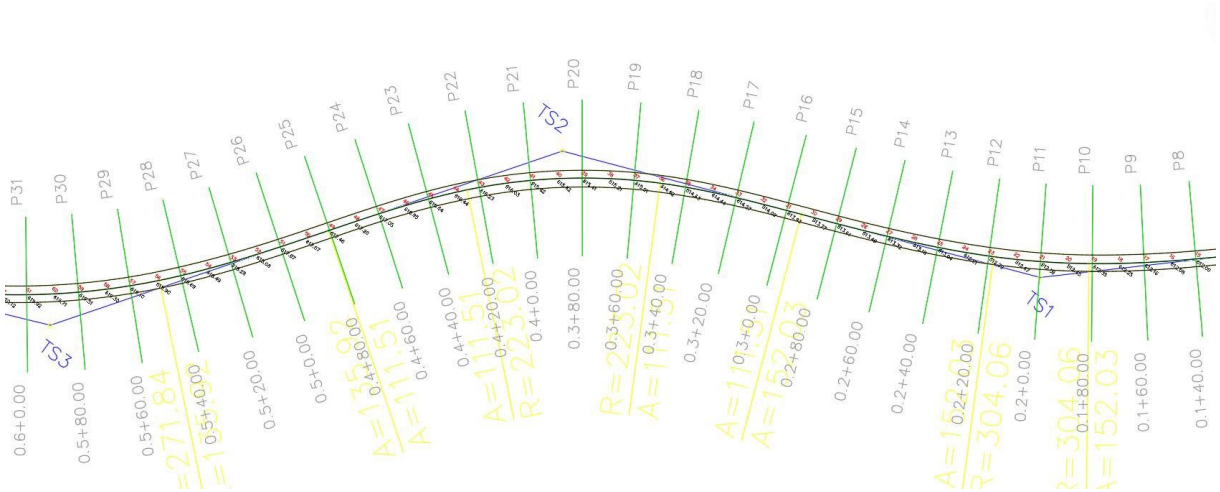
INTRODUCTION

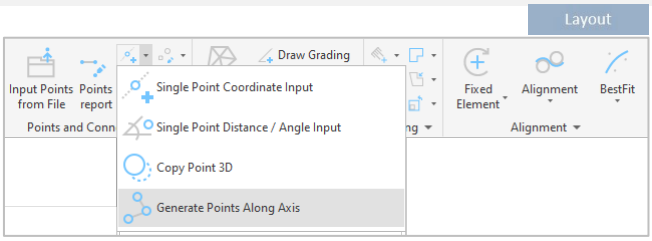
This command allows you to generate points along any polylines. The density of the newly generated points can be set either by selecting an arbitrary interval between two adjacent points or by defining the total number of points on the polyline. If the selected polyline is three-dimensional, the heights of the points are also displayed.

Note: If you have objects such as lines or arcs, the command will not work. In this case, convert those types of objects to 2D polylines using the PEDIT command.



Generate Points on the axis

1. Run the Generate Points along axis (11F5) command.



2. Select a 3D polyline (e.g., a 3D road centreline) and then choose one of the following options: - **counter:** sets the counter for the detail point enumeration (i.e. the point labels).
   - **length interval:** specifies the density of the newly generated points by the interval between individual points. (So, you enter the distance between individual points in meters.)
   - **number of intervals:** specifies the number of intervals, the polygon is divided into.

3. To have the points numbered, follow these steps:
   - Click on "Counter" first.
   - Type a number and press "Enter". The numbering of the points will start with the number you enter.
   - Each subsequent number will be incremented by one.

Then you have two options to generate the points along the polyline.

1. Option – Number of intervals

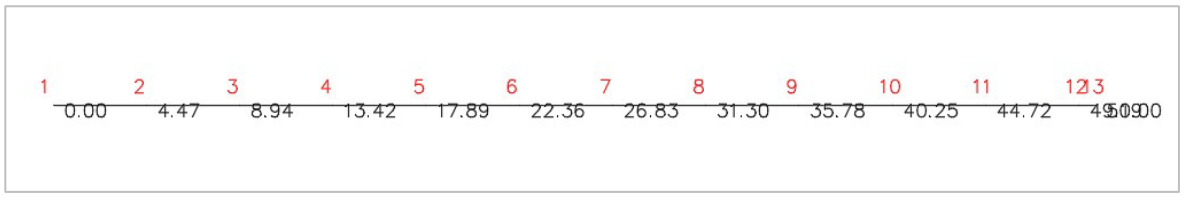
Enter any number and the command will divide the polyline into that many intervals.

If we enter the number 5, for example, it means that the polyline will be divided into 5 intervals, resulting in 6 points, as shown in the image below:

2. Option – Length interval

With this option, you actually enter the distance between individual points.

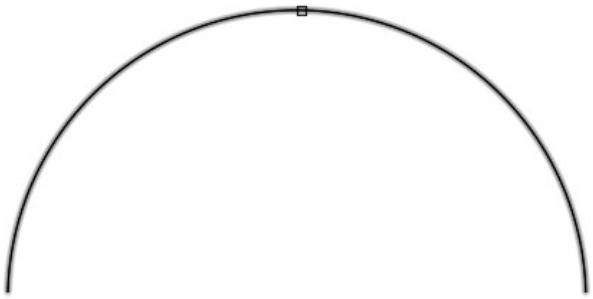
For example, if you enter the number 10, it means that there will be a distance of 10 meters between the first and the next point. In addition, it generates an additional point at the end of the 3D polyline.



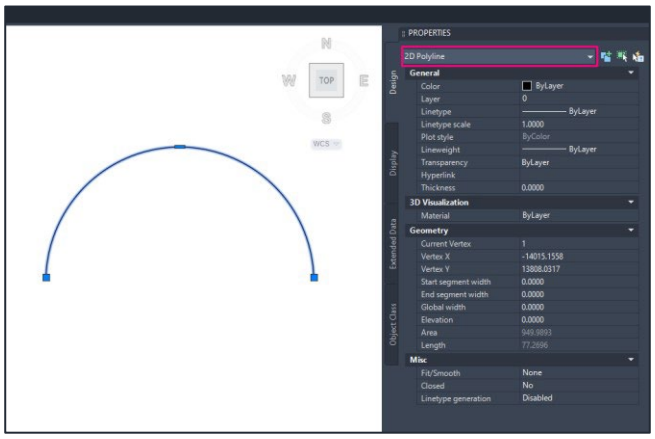
Practical Example: Generate points along arc

As mentioned at the beginning of the tutorial, the Generate Points along axis command does not work on all lines, so some of them need to be converted. You can use the following procedure for this.

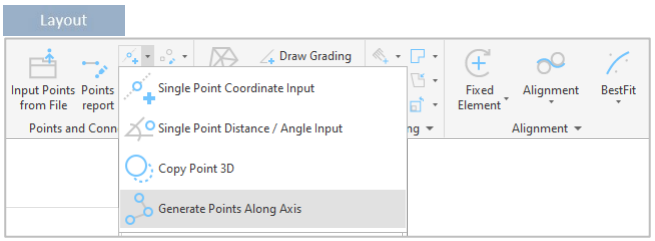
1. Run the PEDIT command and select the element. In our case, we select an arc.



2. Then press Enter twice, and the arc type will change to a 2D polyline. You can see this in the Properties dialogue box.



3. Run the Generate Points along axis (11F5) command.



4. Select the polyline and then enter "Counter" in the command line.

5. After that, type the number 1 and press Enter.

6. Then type 5 for the number of intervals, and the result is shown in the image on the right.