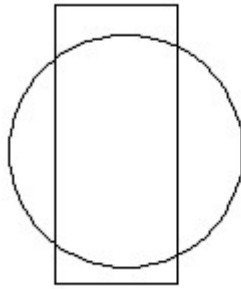


Create an AutoCad drawing with a rectangle and a circle ("Drawing1.dwg"). Aim is to show how to use Prime to change the radius of the circle.



Save the Autocad drawing as a dxf file. This process works for all versions of dxf but may need adjustment between versions. I have used dxf version 2010. DXF are just text files.

```
dxf_text := READTEXT("D:\MathCad\Test\Drawing1-2010.dxf")
```

Read in the file. Note in Mathcad 15 this gets a one column array as in the text file. Prime however despite there being only one column reads 10 and sets the data to "NAN" in the latter ghost columns. You need to extract the first column only in Prime.

```
dxf_text := dxf_text(0)
```

You can now use the match command to find all the circles in the DXF file. Index zero is the first circle (In our case the only circle).

```
start := match("AcDbCircle", dxf_text)0
```

The version 2010 dxf file has the following information for circles. It is different in different dxf versions. Note 10 = centre x, 20 = y, 30 = z in current working plane (in our case global) and 40 = radius. It is 8 steps from 'AcDbCircle' our search term to radius.

```
0  
CIRCLE  
5  
1F3  
330  
1F  
100  
AcDbEntity  
8  
0  
100  
AcDbCircle  
10  
1544.274487694663  
20  
1174.125592300636  
30  
0.0  
40  
211.2095883928208
```

Read the radius.

$$dx\textit{f\_text}_{start+8} = 211.21$$

Adjust the radius

$$dx\textit{f\_text}_{start+8} := dx\textit{f\_text}_{start+8} \cdot 1.3$$

Save the adjusted data back as a dxf file version 2010.

```
A := WRITETEXT("D:\MathCad\Test\Drawing2-2010.dxf", dx\textit{f\_text})
```

Note: This works with the default settings in Mathcad 15. Prime uses inverted commas at each end of character data whereas dxf does not. Using Prime you need a good text file editor to replace all the " with blanks to get the dxf file.

Now read the dxf file with Autocad and the dxf file can be saved as a drawing file DWG format. Note the radius of the circle is resized by Mathcad15 or Prime

