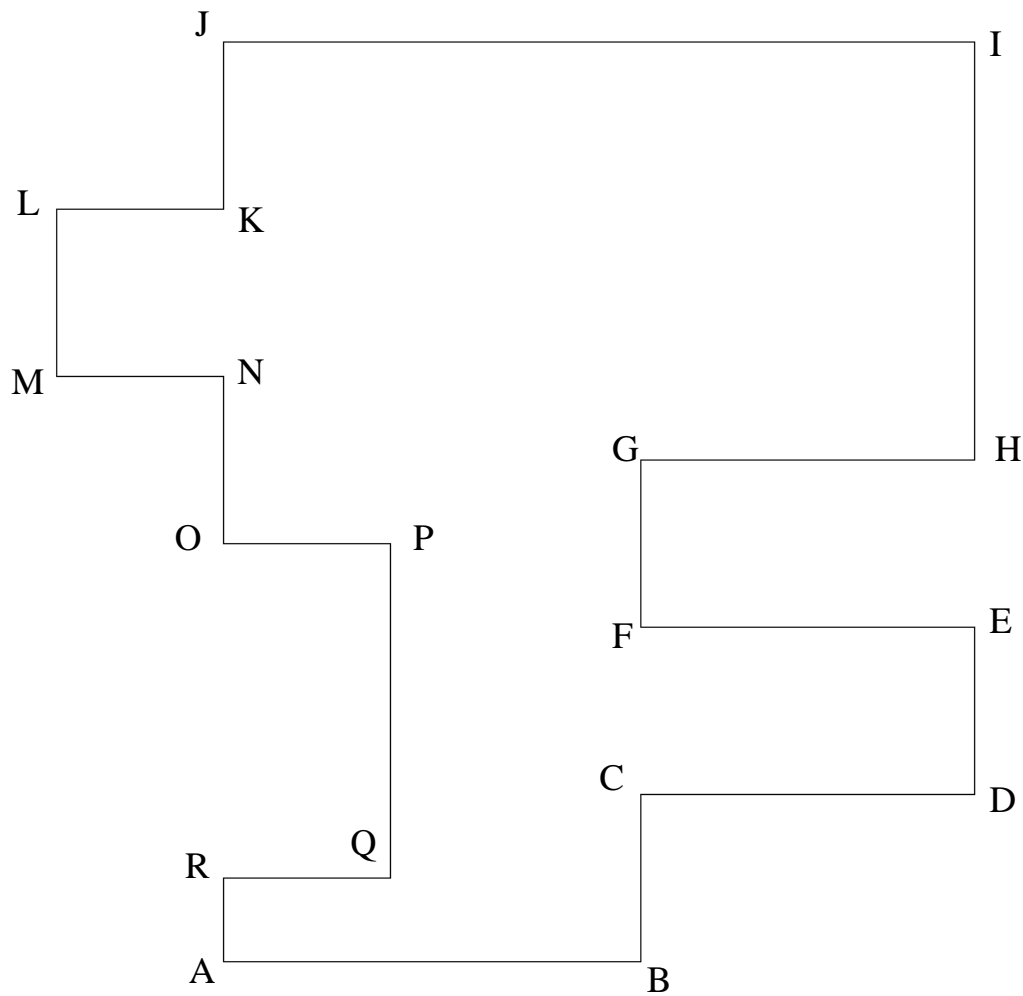


20 DAYS OF 2D CAD EXERCISES

2D CAD Exercises is designed to help CAD beginners practice and learn CAD through Exercises

Exercise 1

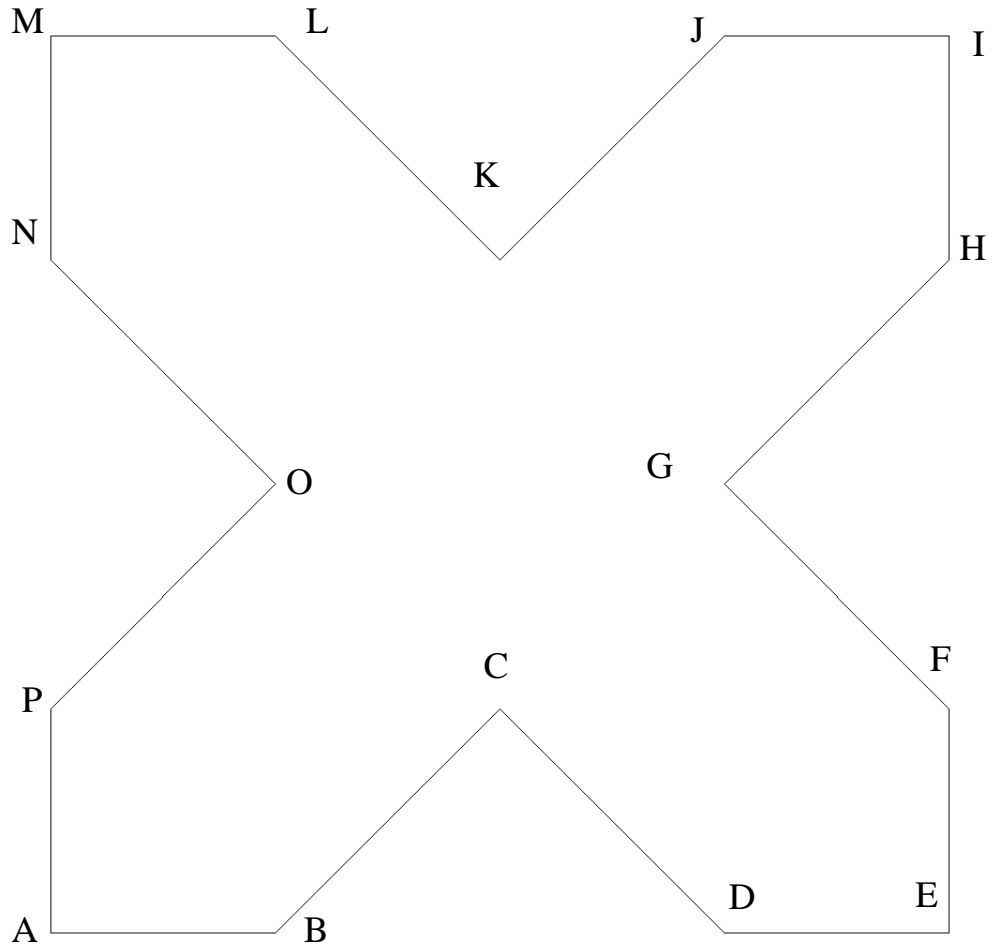


Coordinates:

A=(100,100), B=(105,100), C=(105,102), D=(109,102), E=(109,104),
F=(105,104), G=(105,106), H=(109,106), I=(109,111), J=(100,111),
K=(100,109), L=(98,109), M=(98,107), N=(100,107), O=(100,105),
P=(102,105), Q=(102,101), R=(100,101).

Exercises 1 and 2 are based on the concept of coordinates. You are expected to draw these figures using entirely the coordinate system and the command windows.

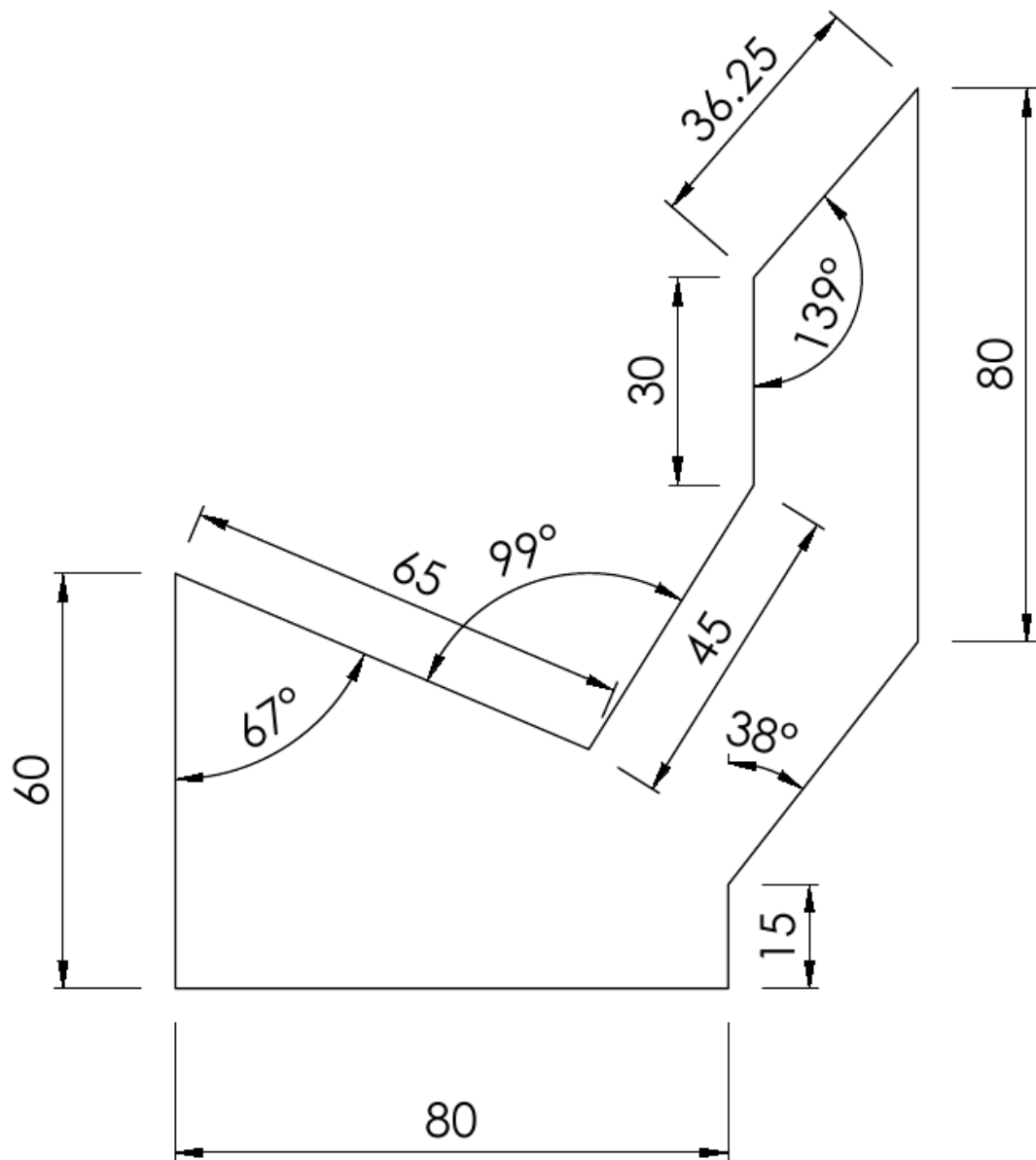
Exercise 2



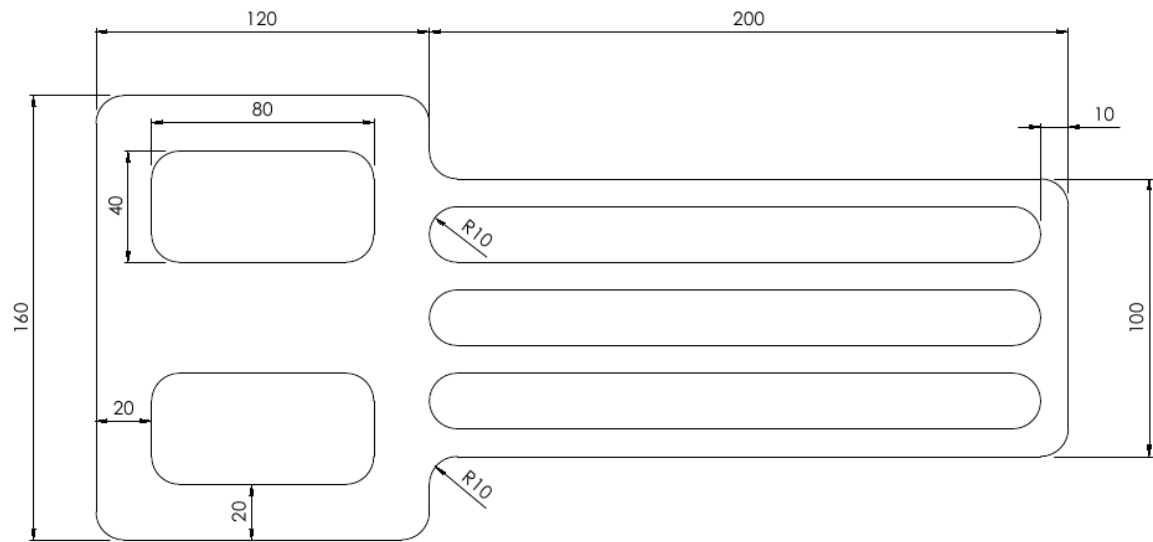
Coordinates:

A=(290,100), B=(340,100), C=(390,150),
D=(440,100), E=(490,100), F=(490,150), G=(440,200),
H=(490,250), I=(490,300), J=(440,300), K=(390,250),
L=(340,300), M=(290,300), N=(290,250), O=(340,200),
P=(290,150).

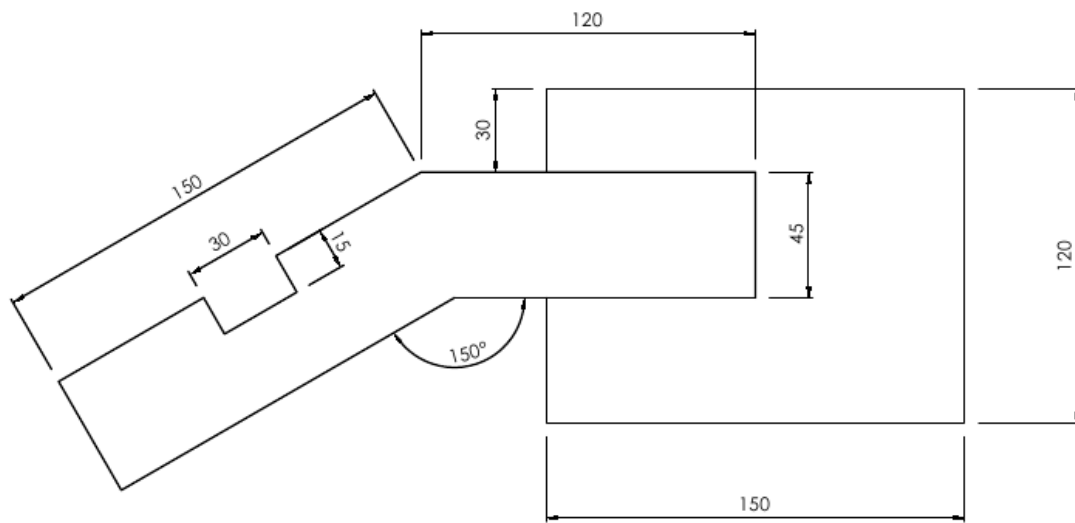
Exercise 3



Exercise 4



Exercise 5

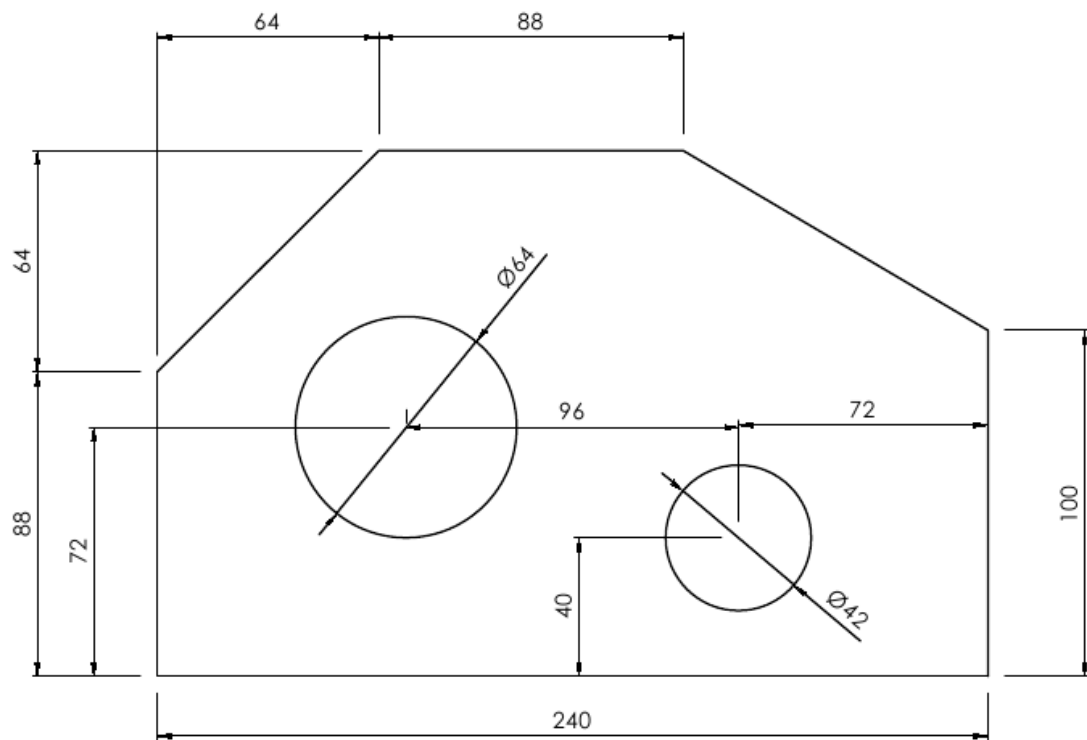


HINT:

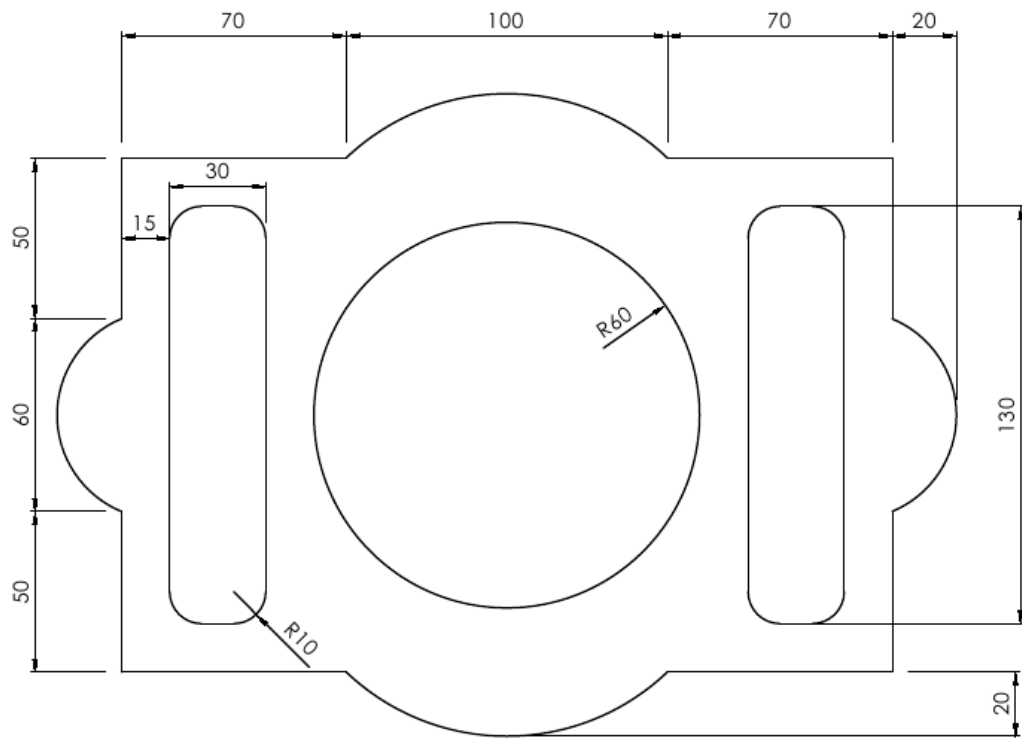
Draw the line of length 150 straight (with 0 degree to the ground) before rotating it when you are done with it.

You can easily rotate it using the ROTATE command. How about the angle?

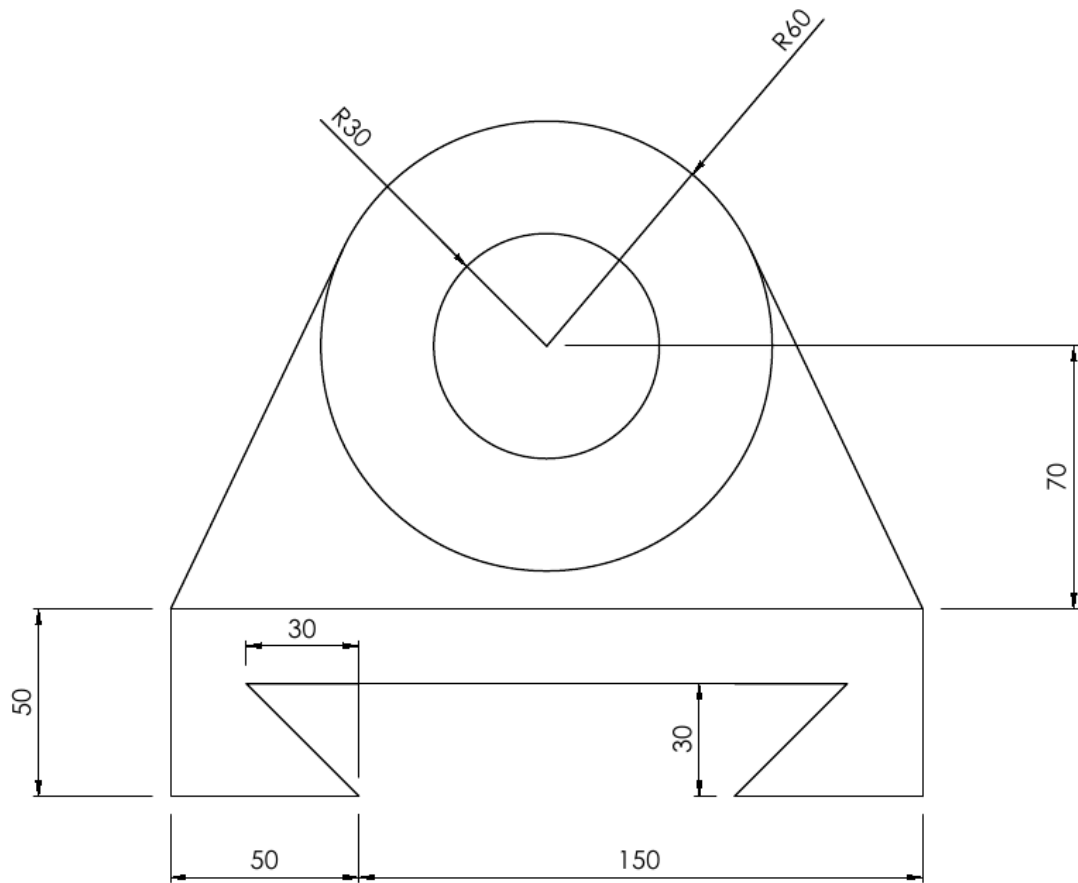
Exercise 6



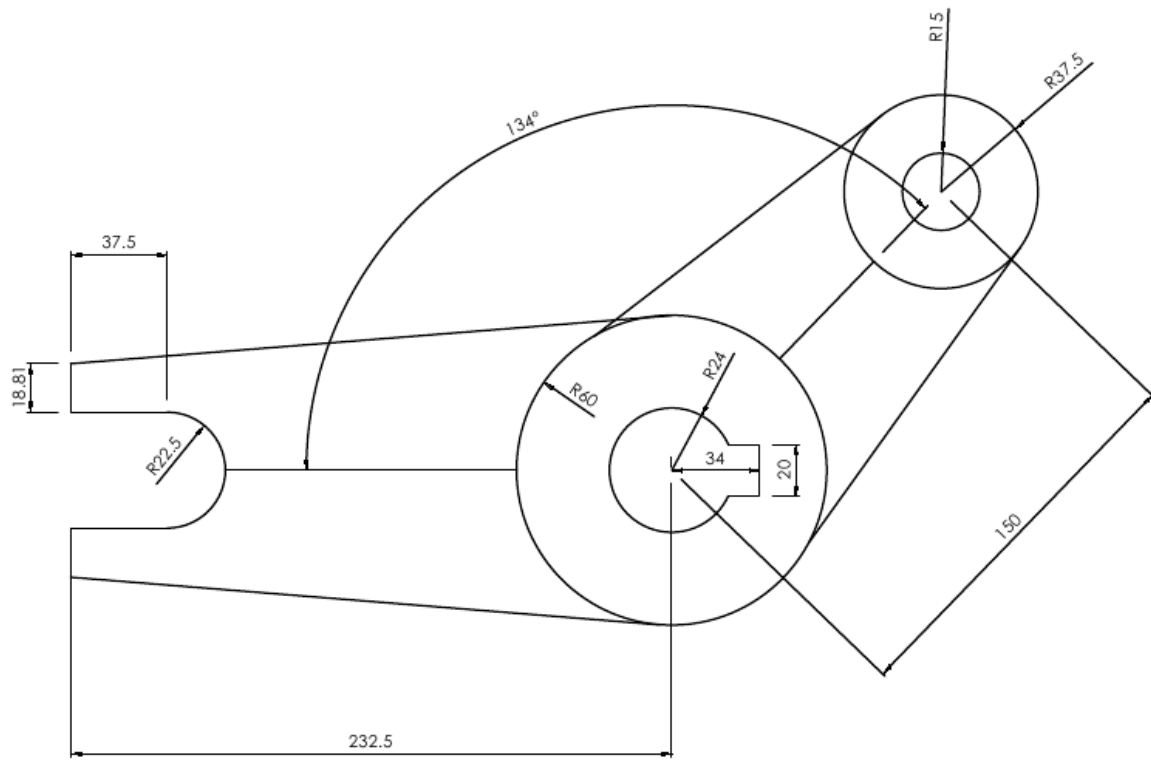
Exercise 7



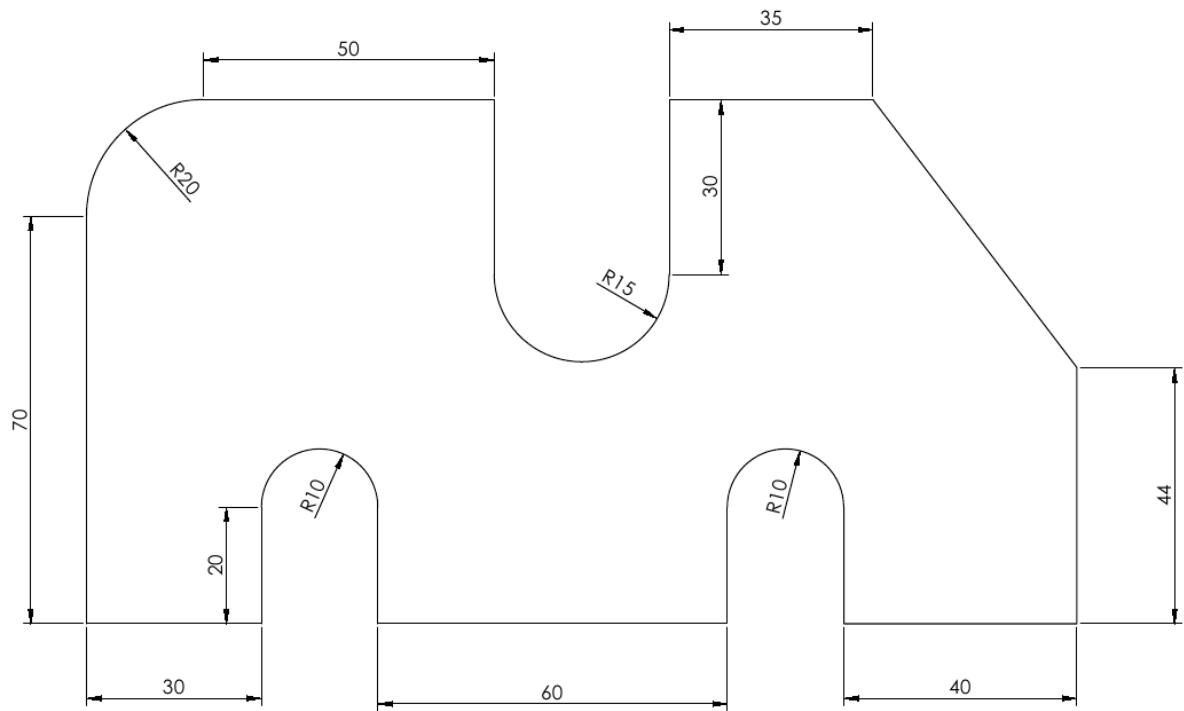
Exercise 8



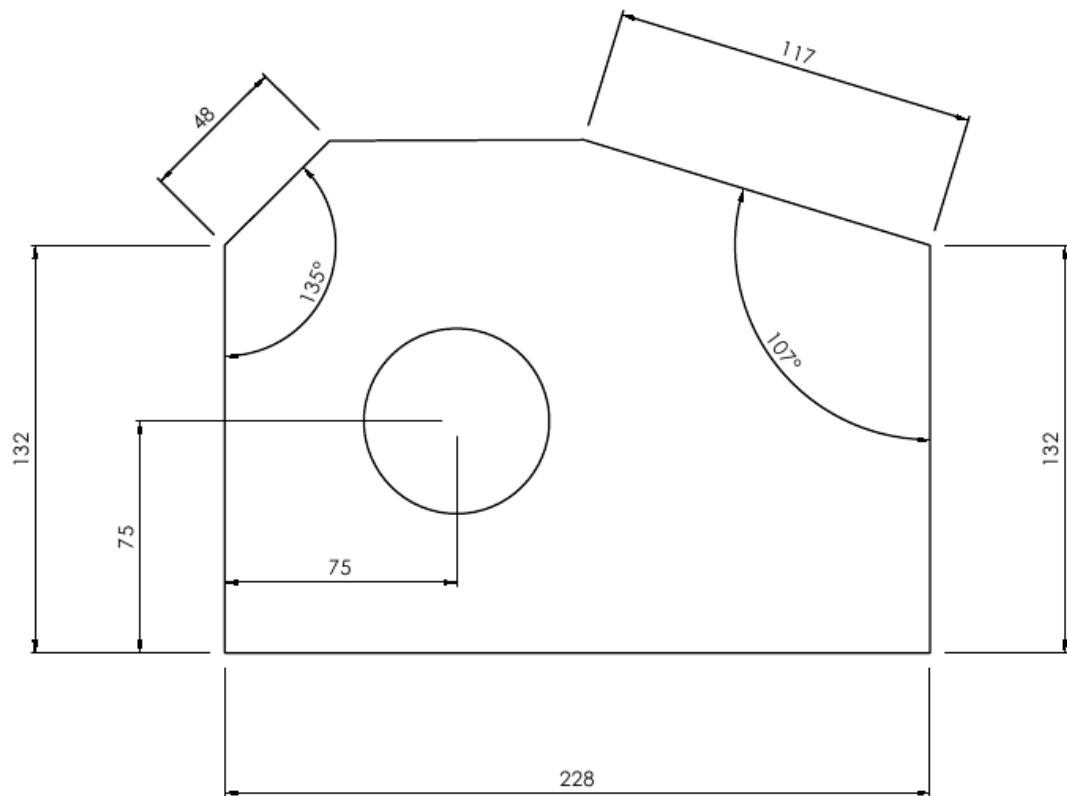
Exercise 9



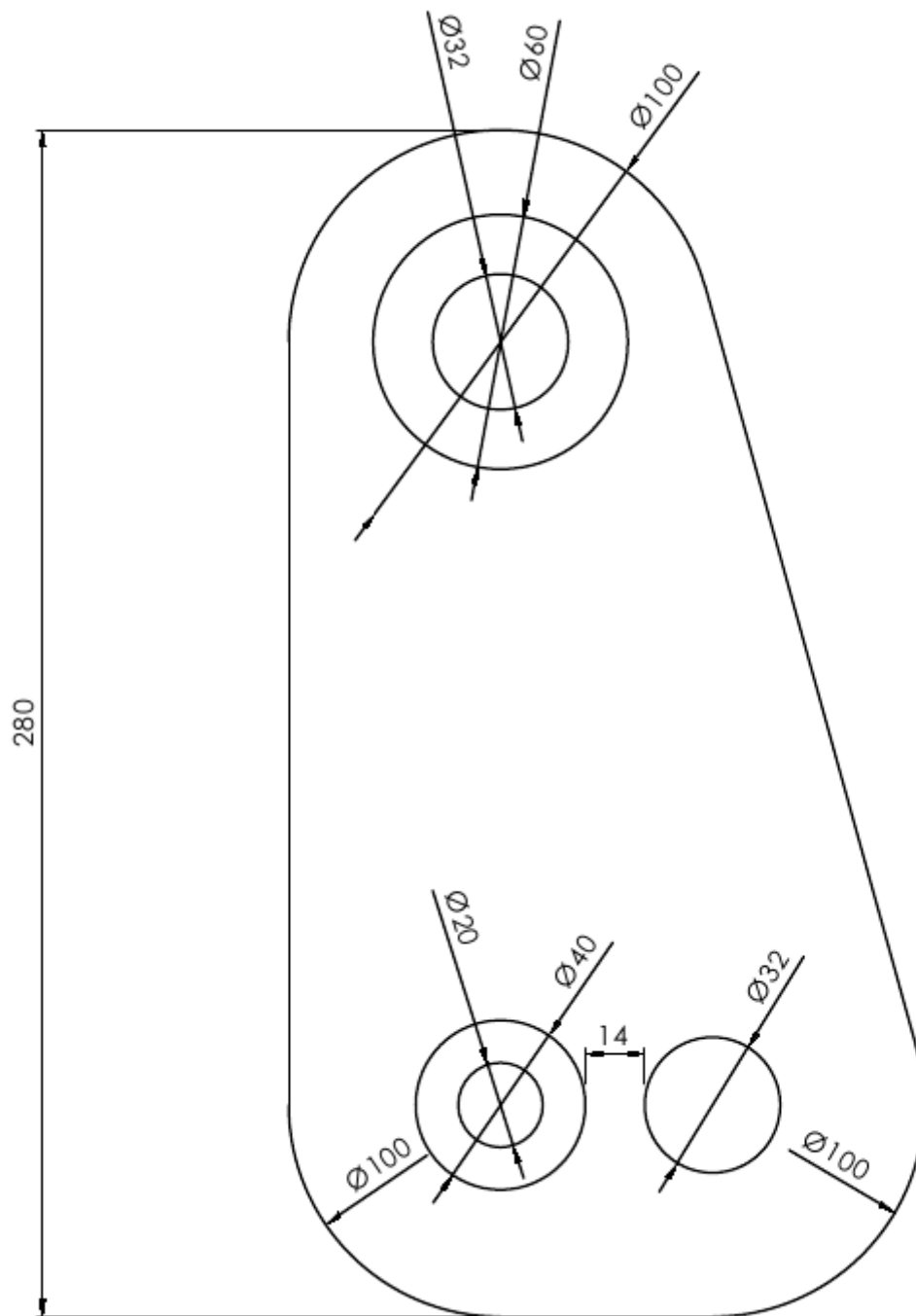
Exercise 10



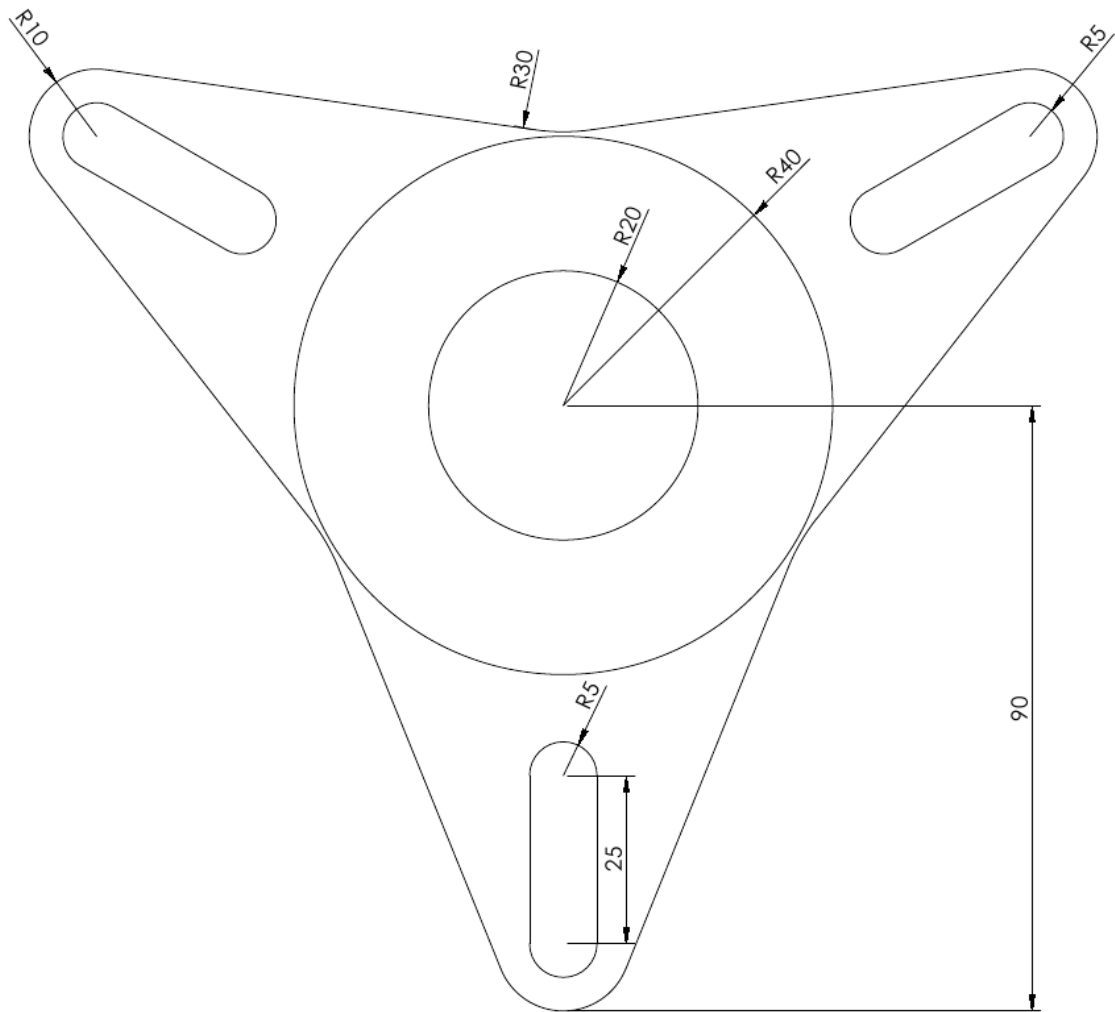
Exercise 11



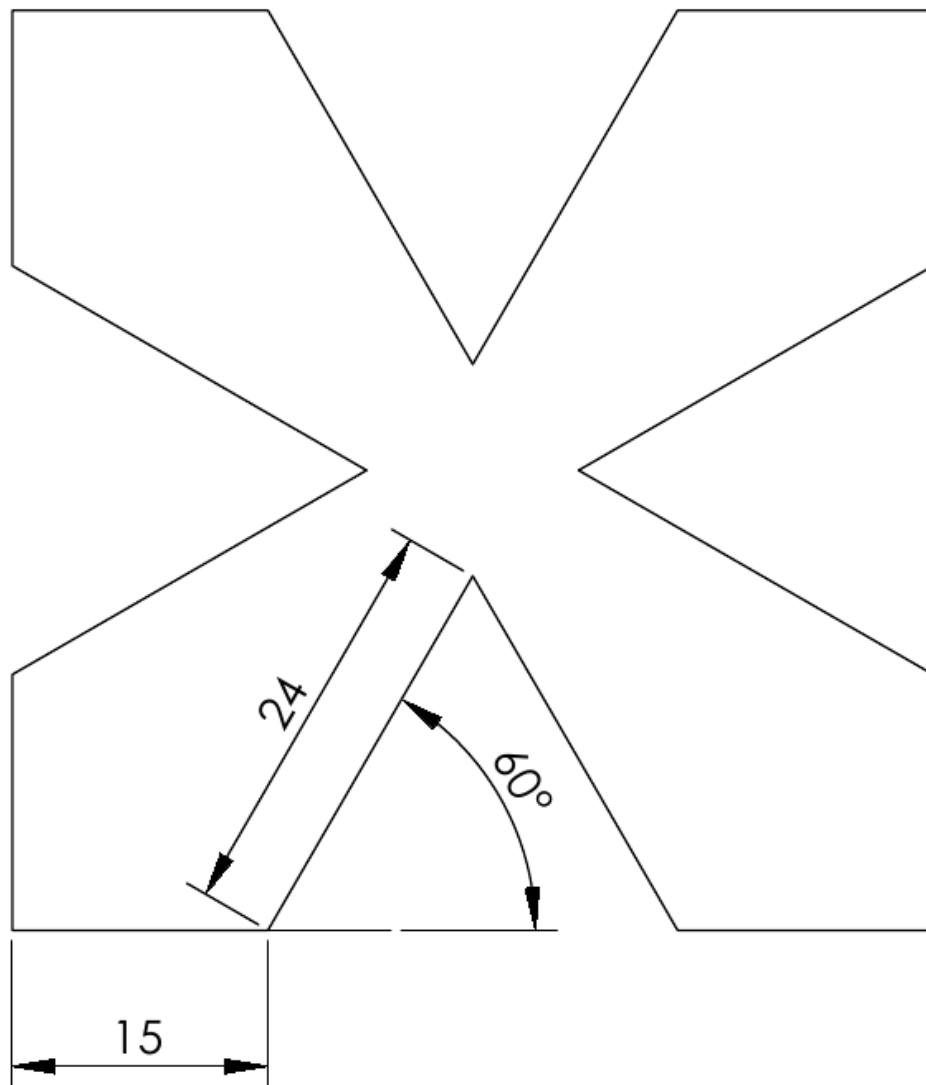
Exercise 12



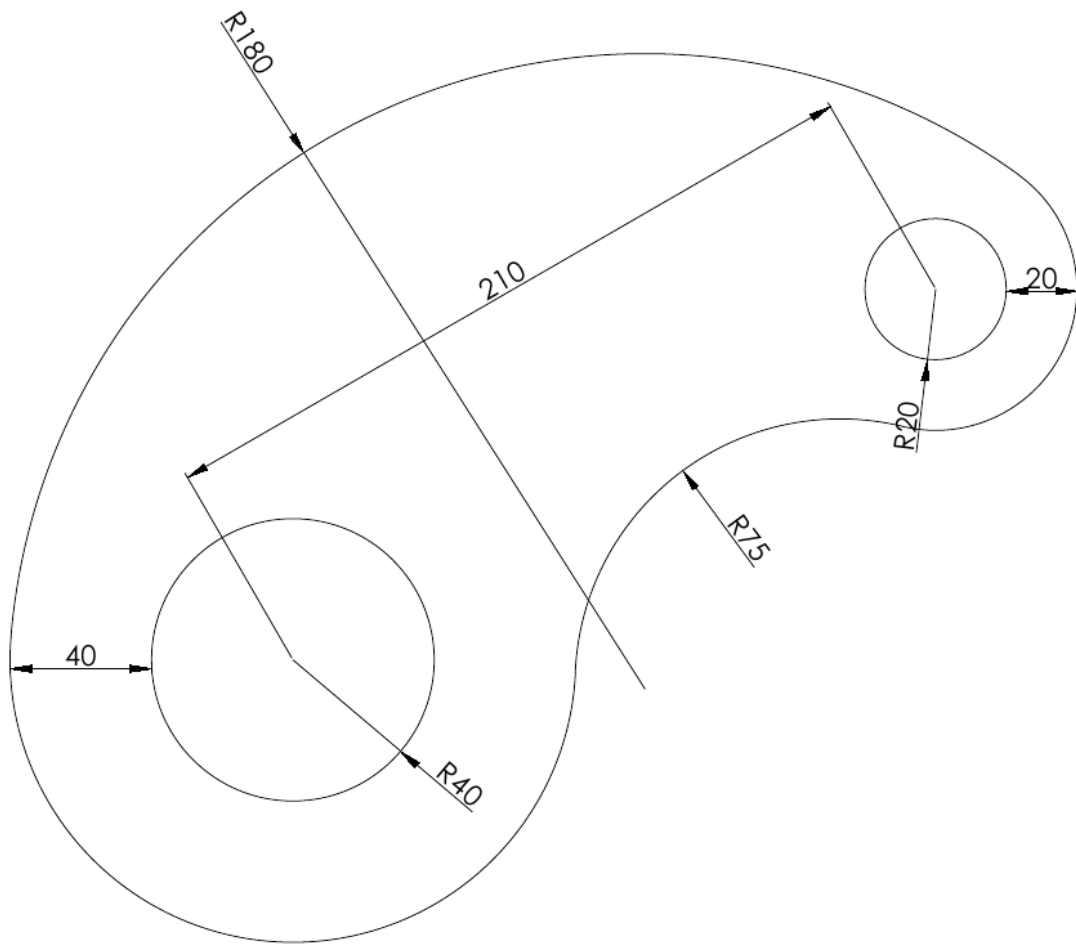
Exercise 13



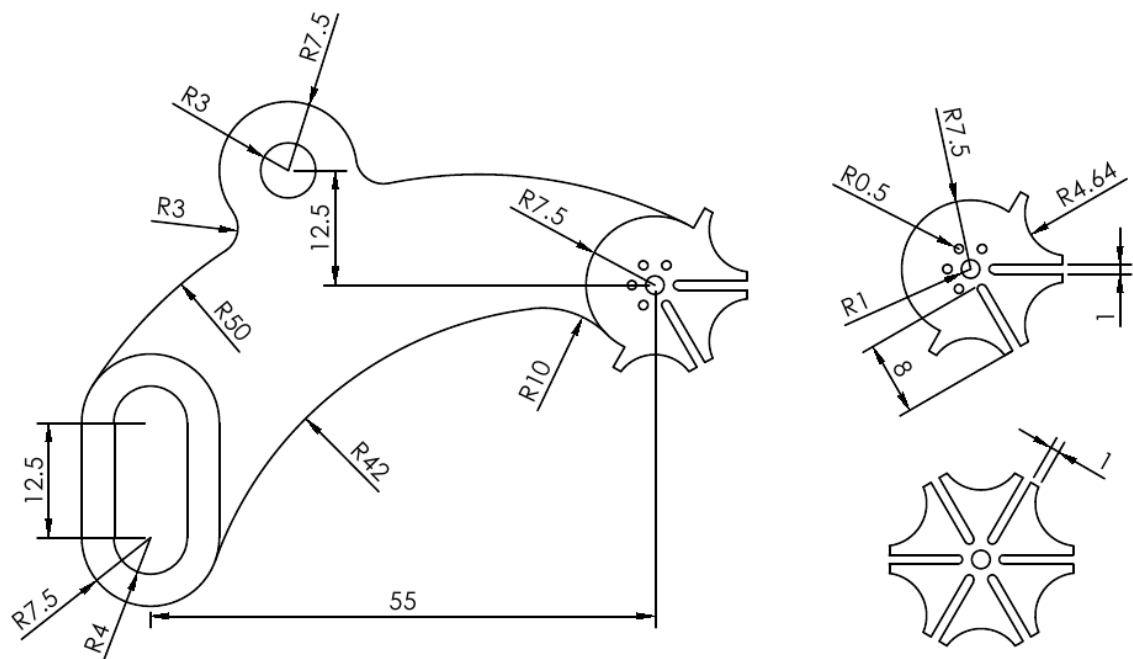
Exercise 14



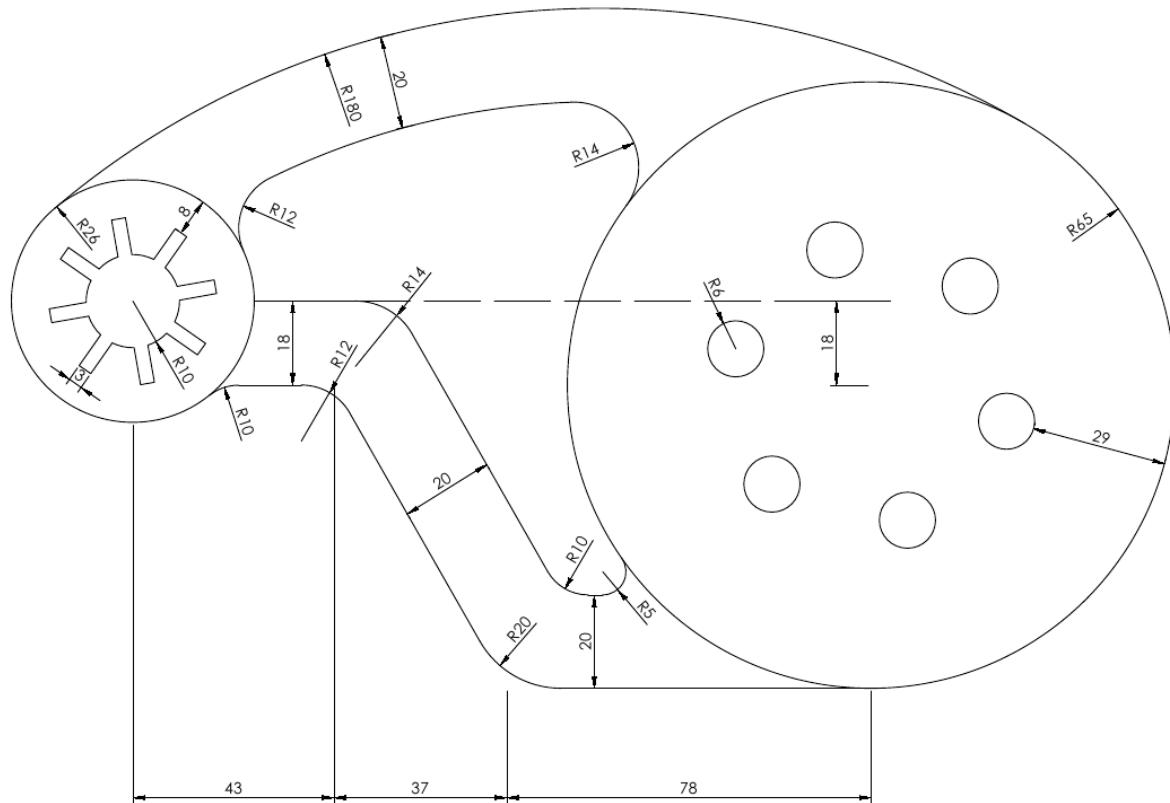
Exercise 15



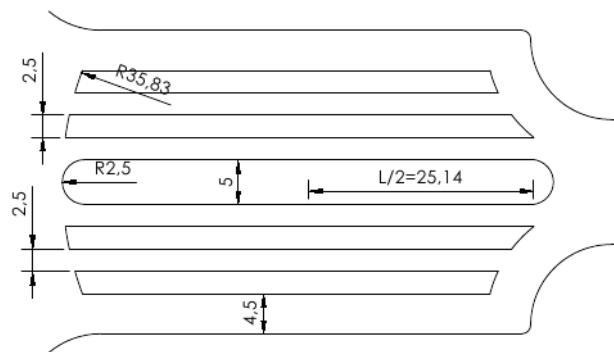
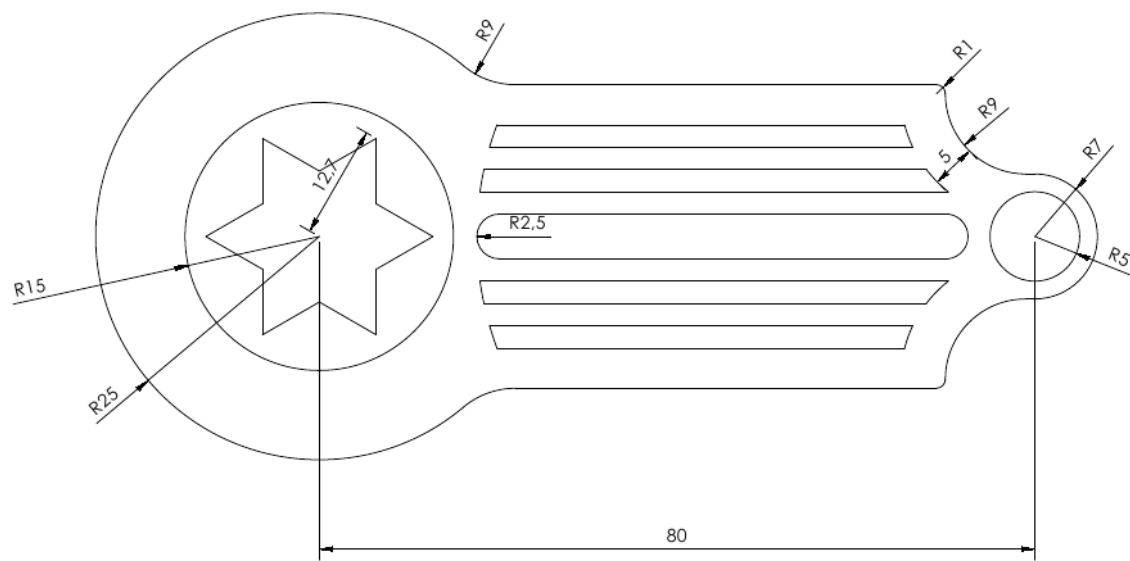
Exercise 16

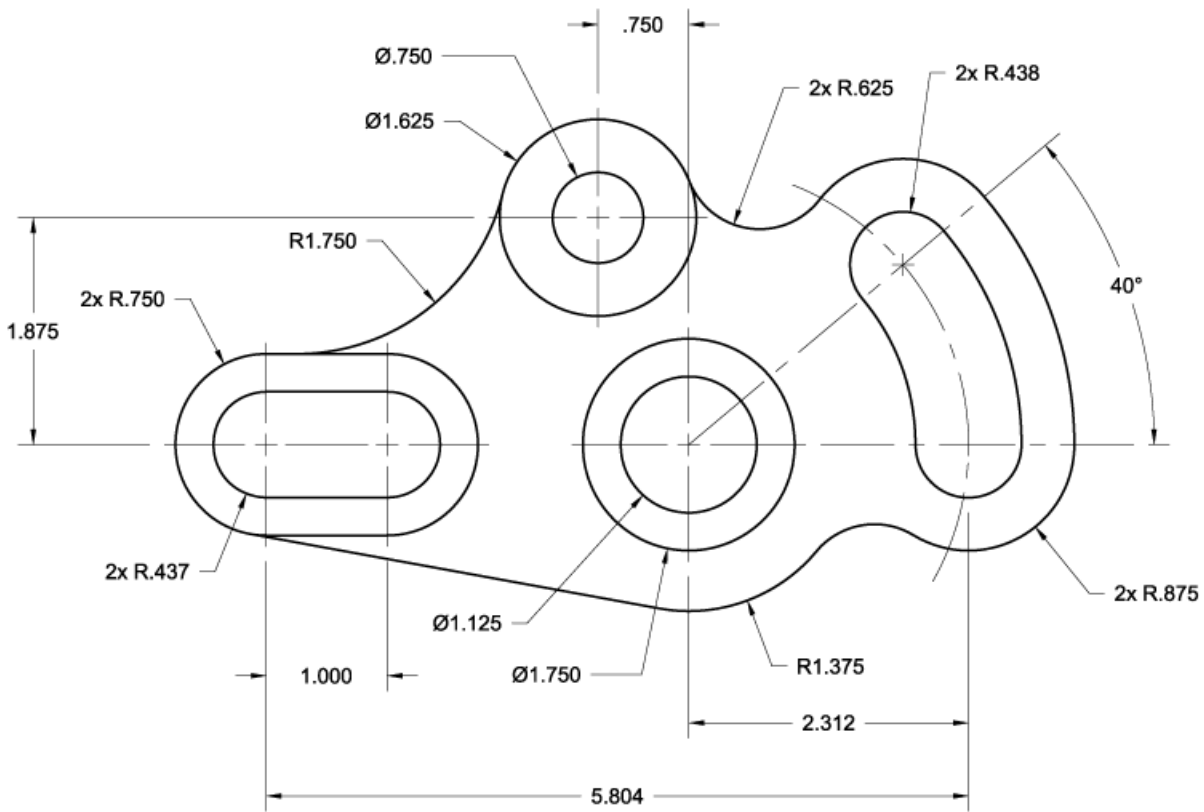


Exercise 17



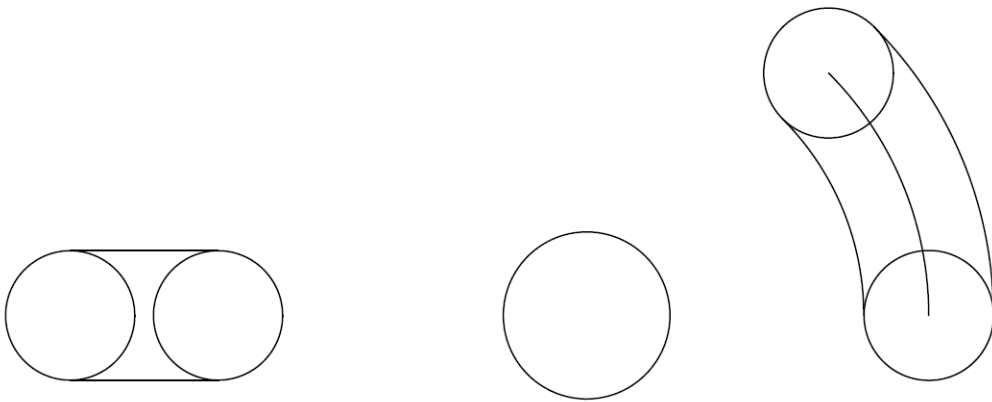
Exercise 18



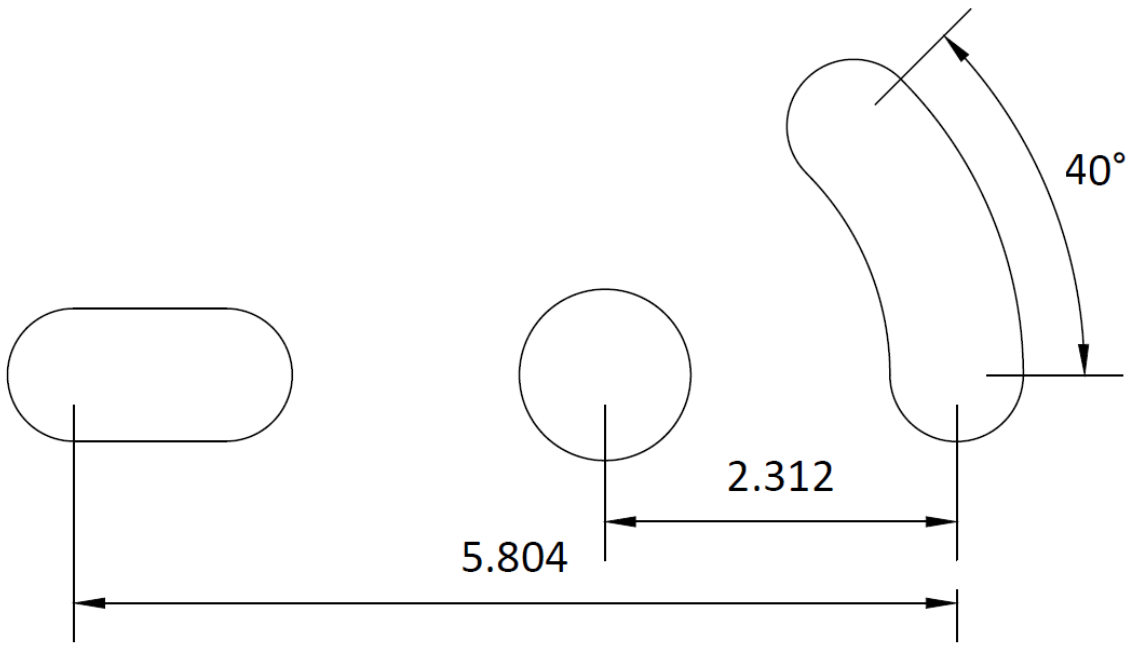


Hint

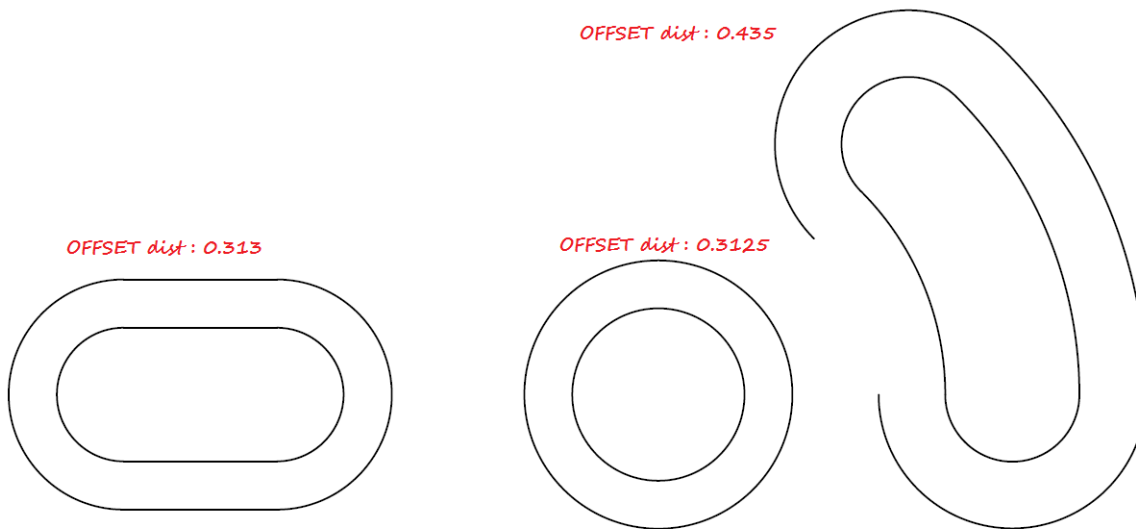
Use the CIRCLE and LINE command to get the following objects.



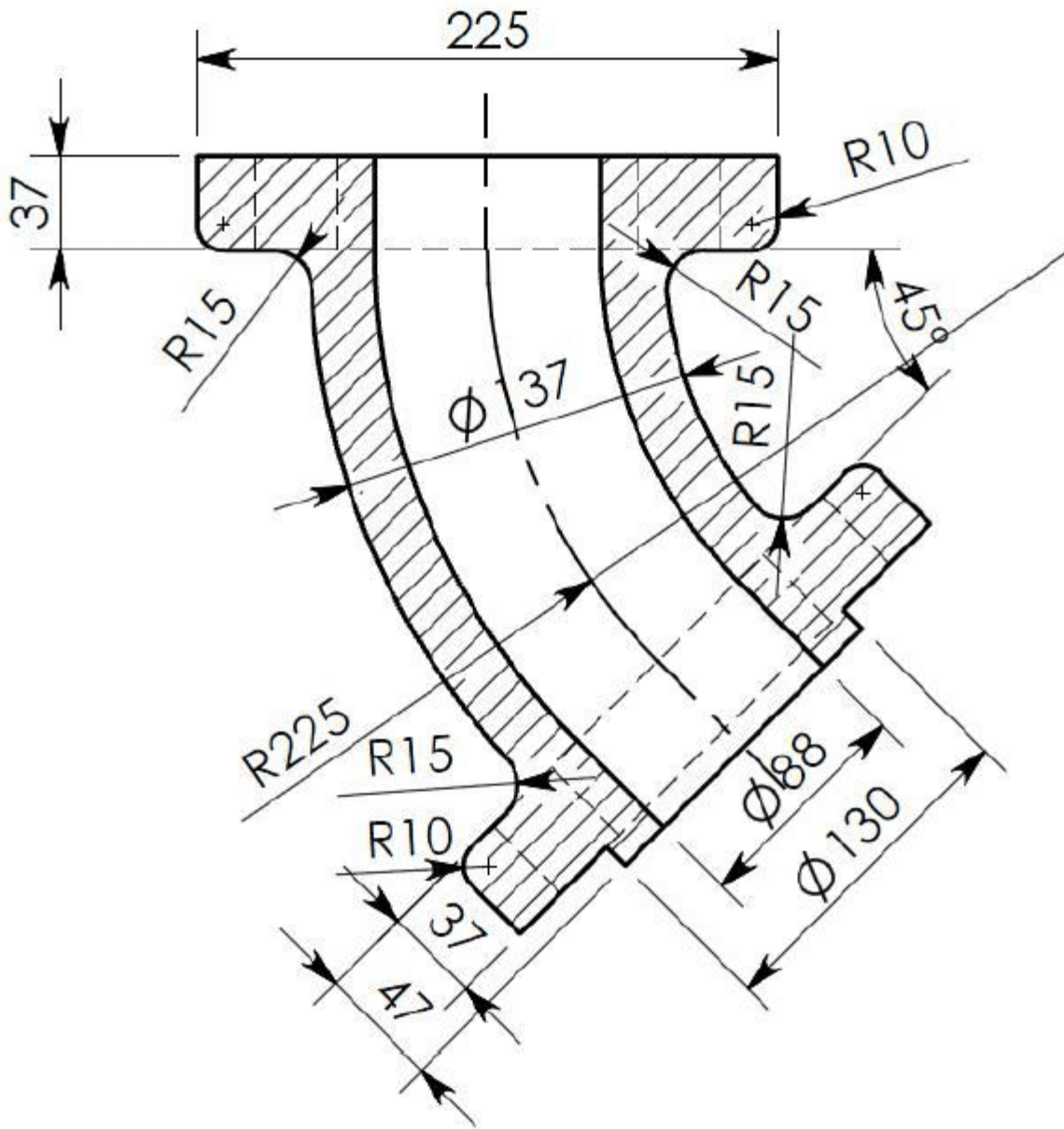
Clean it up using the TRIM command, you should have this



Use the OFFSET command to get the outer image of each block. You will need to find the appropriate OFFSET dimension for each block.



Today we have this "bent pipe joint" in 2D to draw as an exercise in AutoCAD. You can go ahead and use the HATCH command at the end of the design, nonetheless the more important in this exercise is to use a little bit of thinking and all techniques we have learned to get the curve right. All dimensions from your design should coincide with the one in the exercise.



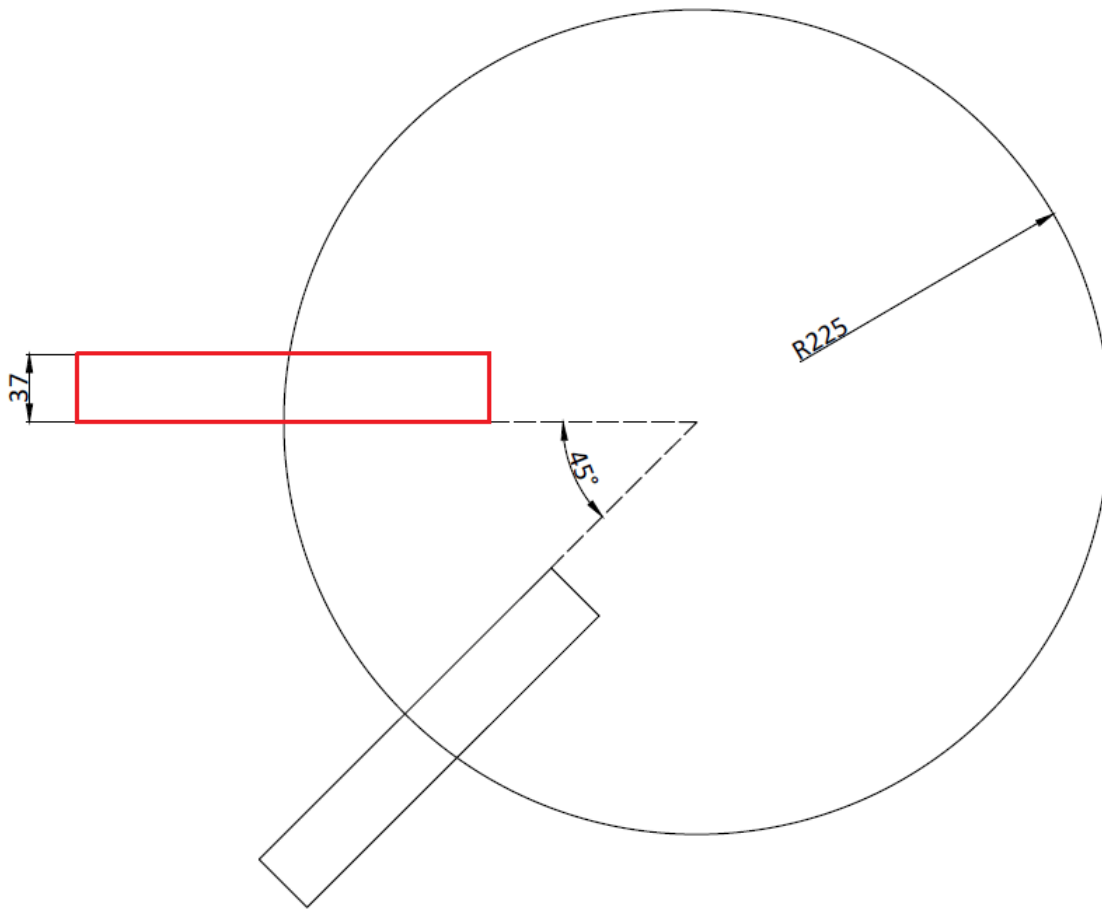
Hint

The most tricky part in the exercise in my opinion is to get the curve shape right, and to place the two ends at their right positions.

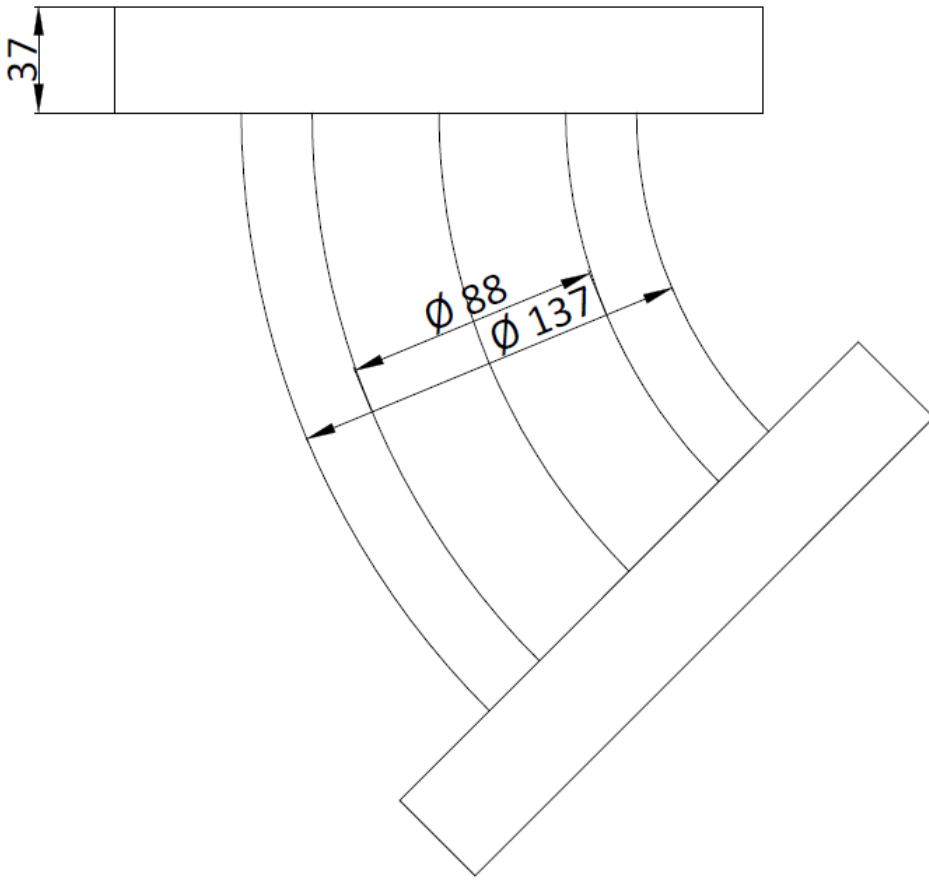
To achieve this. Use the trick shown below.

Draw the rectangle 37 x 225 and rotate it around the R225 circle with an angle of 45 degrees. And use the R225 circle to obtain the curve of the bent.

The circle intersects the rectangle at the center of the lower side.



Use the **OFFSET COMMAND** to get outer lines from the one left by the R225 circle. You can easily find the OFFSET distances using the inner and outer diameter of the pipe.



All hard parts have been done. You will need [to use the FILLET command](#) to get those rounded corners.