



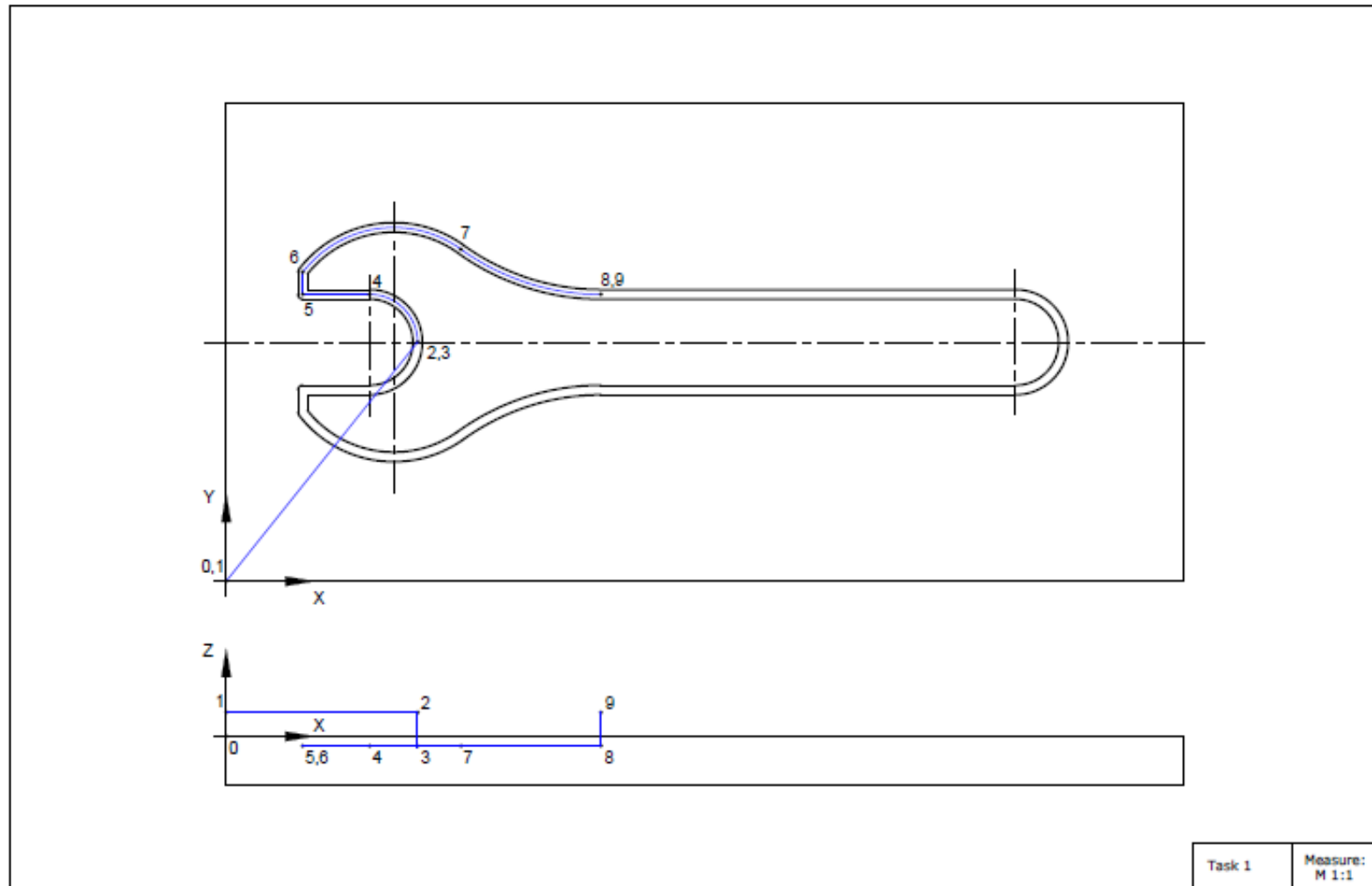
Field of education:
Mechanical engineering

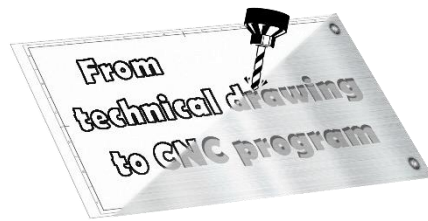
Professional qualification:
CNC operator

Exercise:
**Programming of CNC machine
(solution)**

Variant:
Task 1 – Wrench 1.1.

Solution:





Required written code that should be inserted into the control unit:

```
G0 Z5  
G0 X40 Y50  
G1 Z-2  
G3 X30 Y60 R10  
G1 X16  
G1 Y64,663  
G2 X49,047 Y69,459 R24  
G3 X78,313 Y60 R50  
G0 Z5  
M30
```

Explanation of the G-code:

%Setting the coordinate system $x = 0$, $y = 0$, $z = 0$; point 0

G0 Z5 %Tool lifting; point 1

G0 X40 Y50 %Positioning at starting point; point 2

G1 Z-2 %Tool entry into material; point 3

G3 X30 Y60 R10 %Radial milling; point 4

G1 X16 %Milling, straight; point 5

G1 Y64,663 %Milling, straight; point 6

G2 X49,047 Y69,459 R24 %Radial milling; point 7

G3 X78,313 Y60 R50 %Radial milling; point 8

G0 Z5 %Tool lifting; point 9

M30 %End of program