



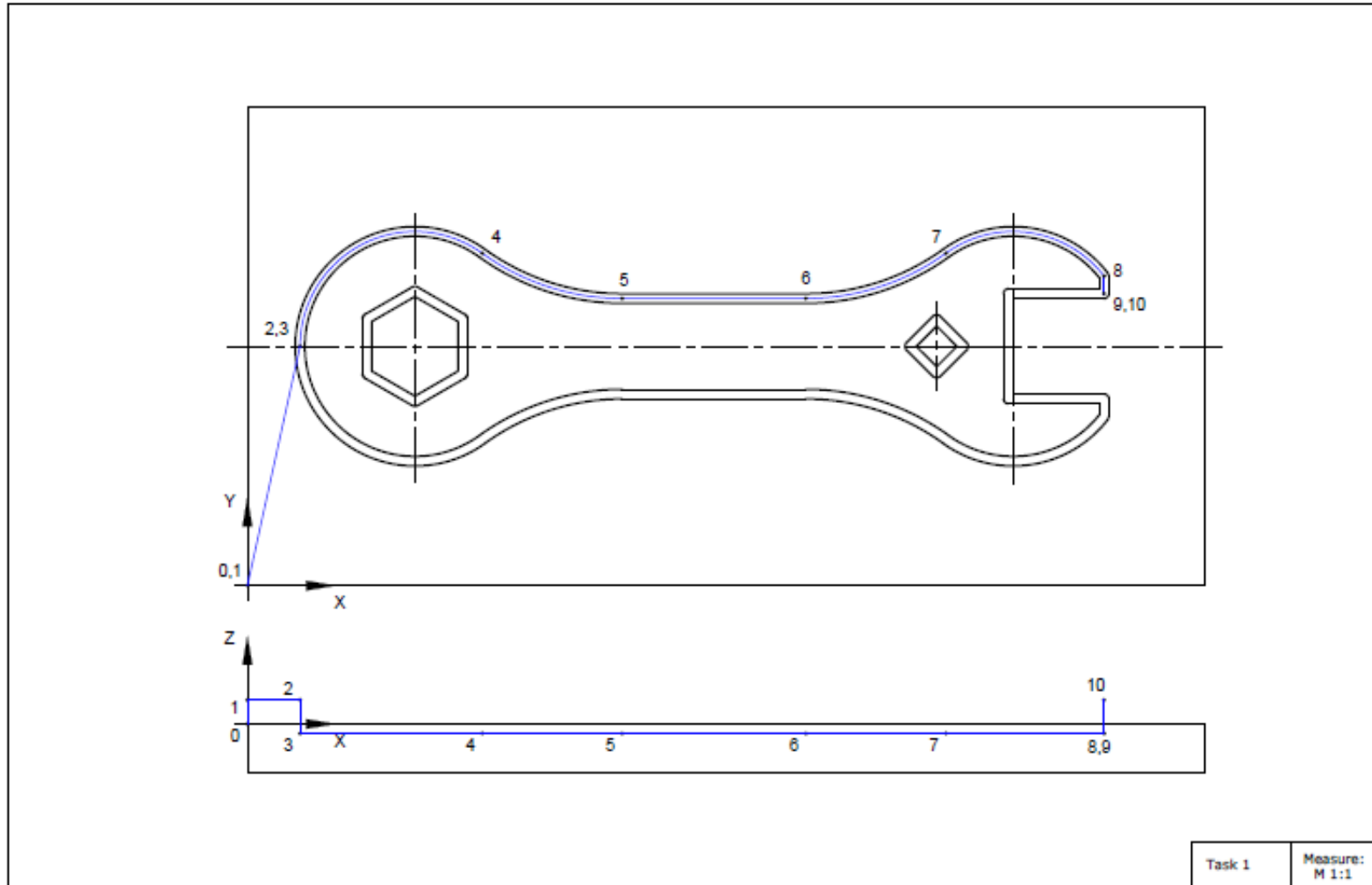
Field of education:  
**Mechanical engineering**

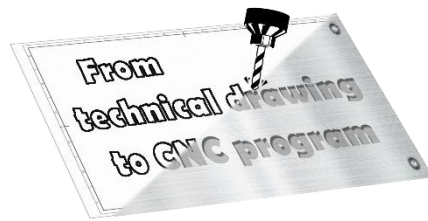
Professional qualification:  
**CNC operator**

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

Variant:  
Task 7 – Wrench 3.1.

Solution:





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

```
G0 Z5  
X11 Y50  
G1 Z-2  
G2 X49,047 Y69,459 R24  
G3 X78,313 Y60 R50  
G1 X116,687  
G3 X145,953 Y69,459 R50  
G2 X179 Y64,663 R24  
G1 Y61  
Z5  
M30
```

**Explanation of the G-code:**

```
%Setting the coordinate system x=0, y=0, z=0; point 0  
G0 Z5 %Lifting of tool; point 1  
X11 Y50 %Positioning at the starting point; point 2  
G1 Z-2 %Tool entry into material; point 3  
G2 X49,047 Y69,459 R24 %Radial milling; point 4  
G3 X78,313 Y60 R50 %Radial milling; point 5  
G1 X116,687 %Straight milling; point 6  
G3 X145,953 Y69,459 R50 %Radial milling; point 7  
G2 X179 Y64,663 R24 %Radial milling; point 8  
G1 Y61 %Straight milling; point 9  
Z5 %Lifting of tool; point 10  
M30 %End of program
```