

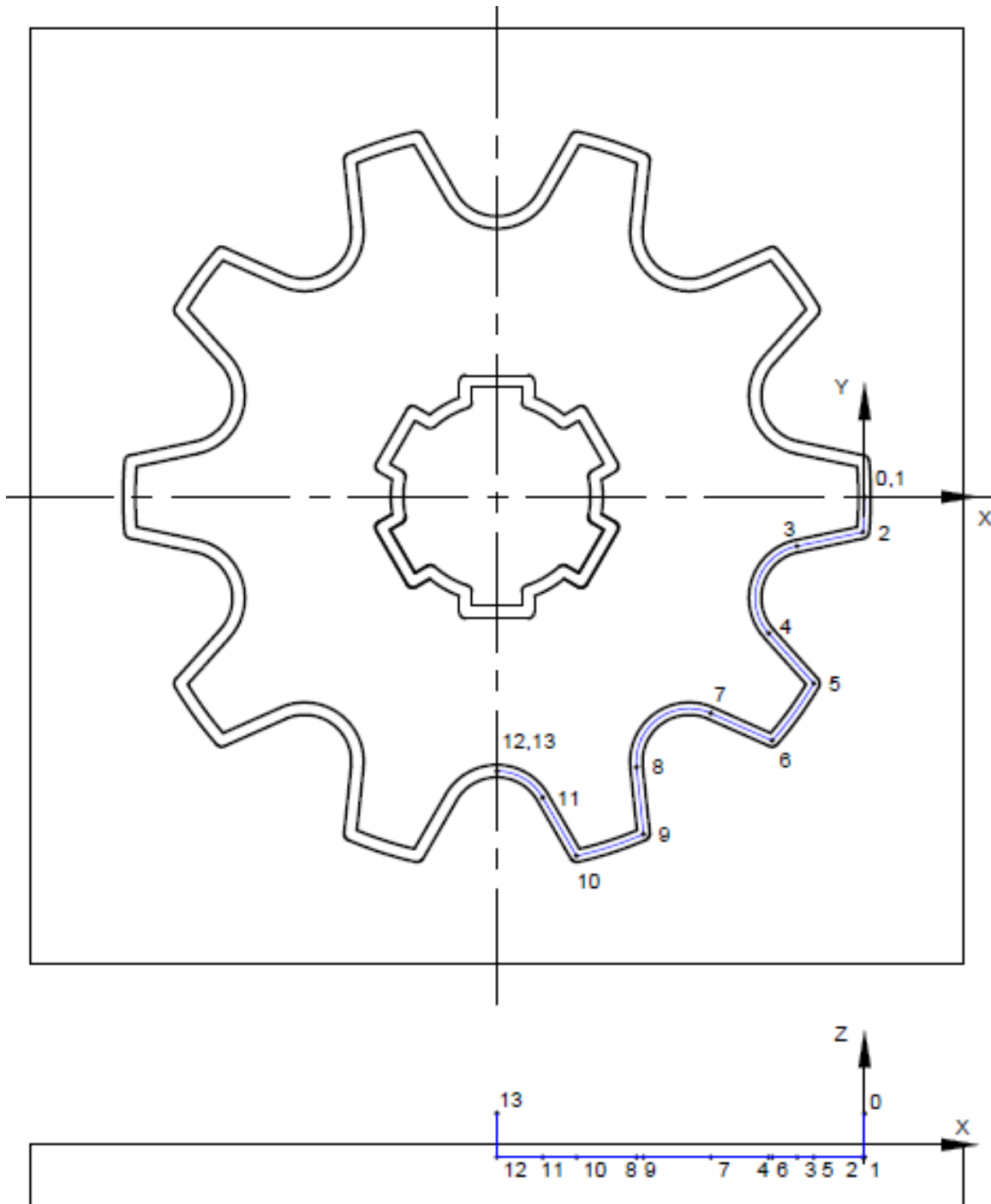
Field of education:  
**Mechanical engineering**

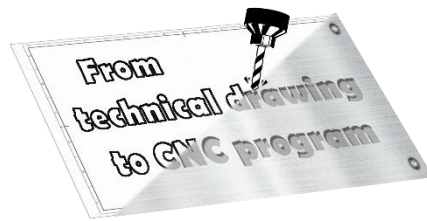
Professional qualification:  
**CNC operator**

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

Variant:  
Task 39 – Sprocket 1.3.

Solution:





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

G1 Z-2

G2 X-0,272 Y-5,664 R59

G1 X-10,837 Y-7,909

G3 X-15,386 Y-21,911 R8,5

G1 X-8,159 Y-29,937

G2 X-14,817 Y-39,101 R59

G1 X-24,684 Y-34,708

G3 X-36,595 Y-43,362 R8,5

G1 X-35,466 Y-54,103

G2 X-46,239 Y-57,603 R59

G1 X-51,639 Y-48,25

G3 X-59 Y-44 R8,5

G1 Z5

M30

**Explanation of the G-code:**

%Setting the coordinate system x=0, y=0, z=5; point 0

G1 Z-2 %Tool entry into material; point 1

G2 X-0,272 Y-5,664 R59 %Radial milling; point 2

G1 X-10,837 Y-7,909 %Straight milling; point 3

G3 X-15,386 Y-21,911 R8,5 %Radial milling; point 4

G1 X-8,159 Y-29,937 %Straight milling; point 5

G2 X-14,817 Y-39,101 R59 %Radial milling; point 6

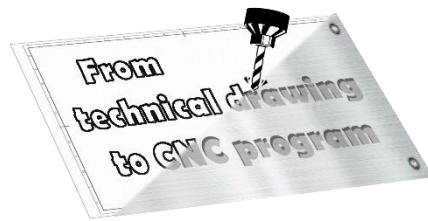
G1 X-24,684 Y-34,708 %Straight milling; point 7

G3 X-36,595 Y-43,362 R8,5 %Radial milling; point 8

G1 X-35,466 Y-54,103 %Straight milling; point 9

G2 X-46,239 Y-57,603 R59 %Radial milling; point 10

G1 X-51,639 Y-48,25 %Straight milling; point 11



G3 X-59 Y-44 R8,5 %Radial milling; point 12

G1 Z5 %Lifting of tool; point 13

M30 %End of program