

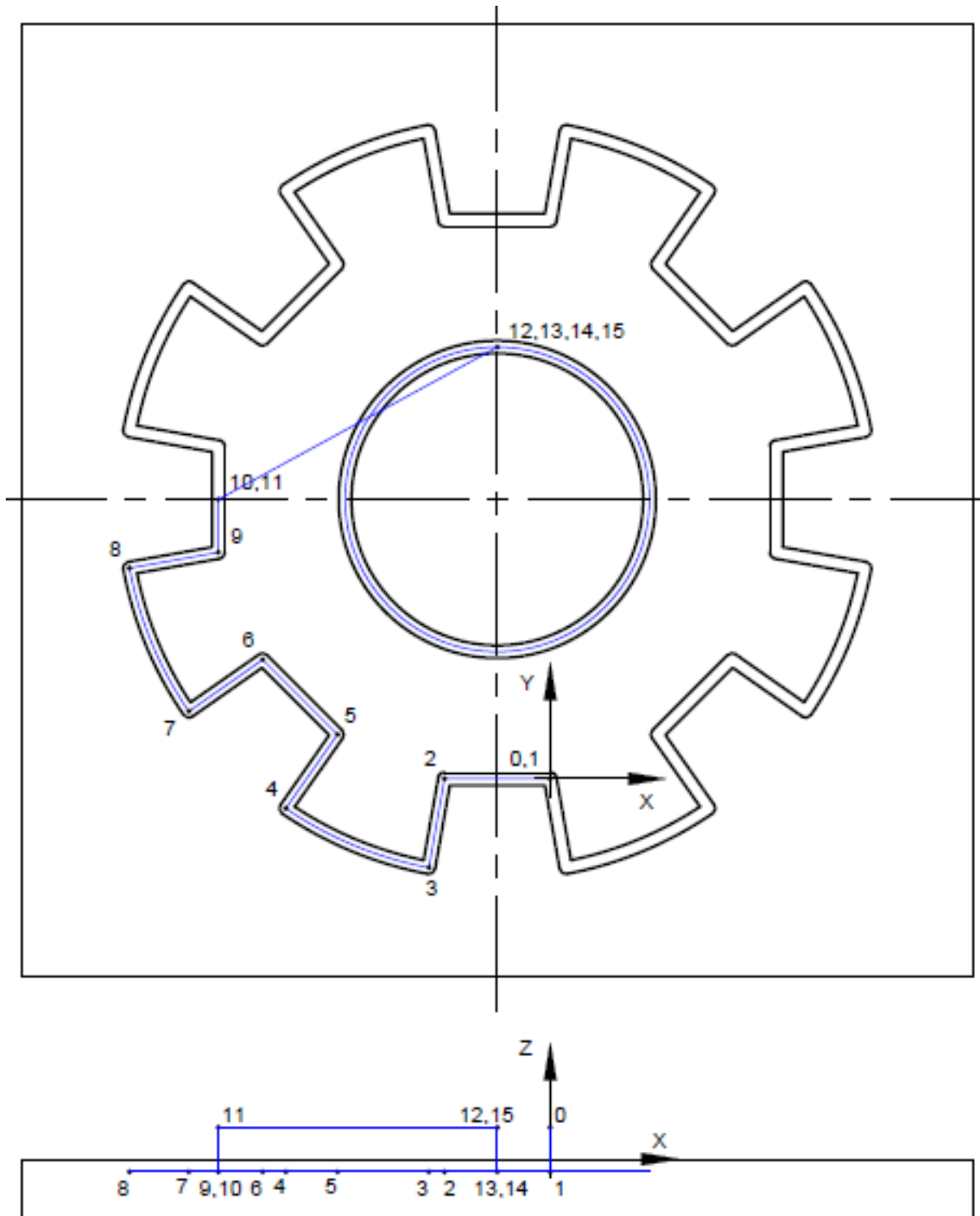
Field of education:  
**Mechanical engineering**

Professional qualification:  
**CNC operator**

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

Variant:  
Task 57 – Sprocket 4.4.

Solution:



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

G1 Z-2  
X-16,678  
X-19,147 Y-14,002  
G2 X-41,71 Y-4,656 R59  
G1 X-33,555 Y6,991  
X-45,348 Y18,784  
X-56,995 Y10,629  
G2 X-66,341 Y33,192 R59  
G1 X-52,339 Y35,661  
Y44  
Z5  
G0 X-8,339 Y68  
G1 Z-2  
G3 X-8,339 Y68 I0 J-24  
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  
X-16,678 %Straight milling; point 2  
X-19,147 Y-14,002 %Straight milling; point 3  
G2 X-41,71 Y-4,656 R59 %Radial milling; point 4  
G1 X-33,555 Y6,991 %Straight milling; point 5  
X-45,348 Y18,784 %Straight milling; point 6  
X-56,995 Y10,629 %Straight milling; point 7  
G2 X-66,341 Y33,192 R59 %Radial milling; point 8  
G1 X-52,339 Y35,661 %Straight milling; point 9  
Y44 %Straight milling; point 10  
Z5 %Lifting of tool; point 11



G0 X-8,339 Y68 %Positioning; point 12

G1 Z-2 %Tool entry into material; point 13

G3 X-8,339 Y68 I0 J-24 %Circle milling; point 14

G1 Z5 %Lifting of tool; point 15

M30 %End of program