Field of education:
Mechanical engineering

Professional qualification:
CNC operator

Exercise:
Programming of CNC machine (solution)

Variant:
Task 42 – Sprocket 1.6.

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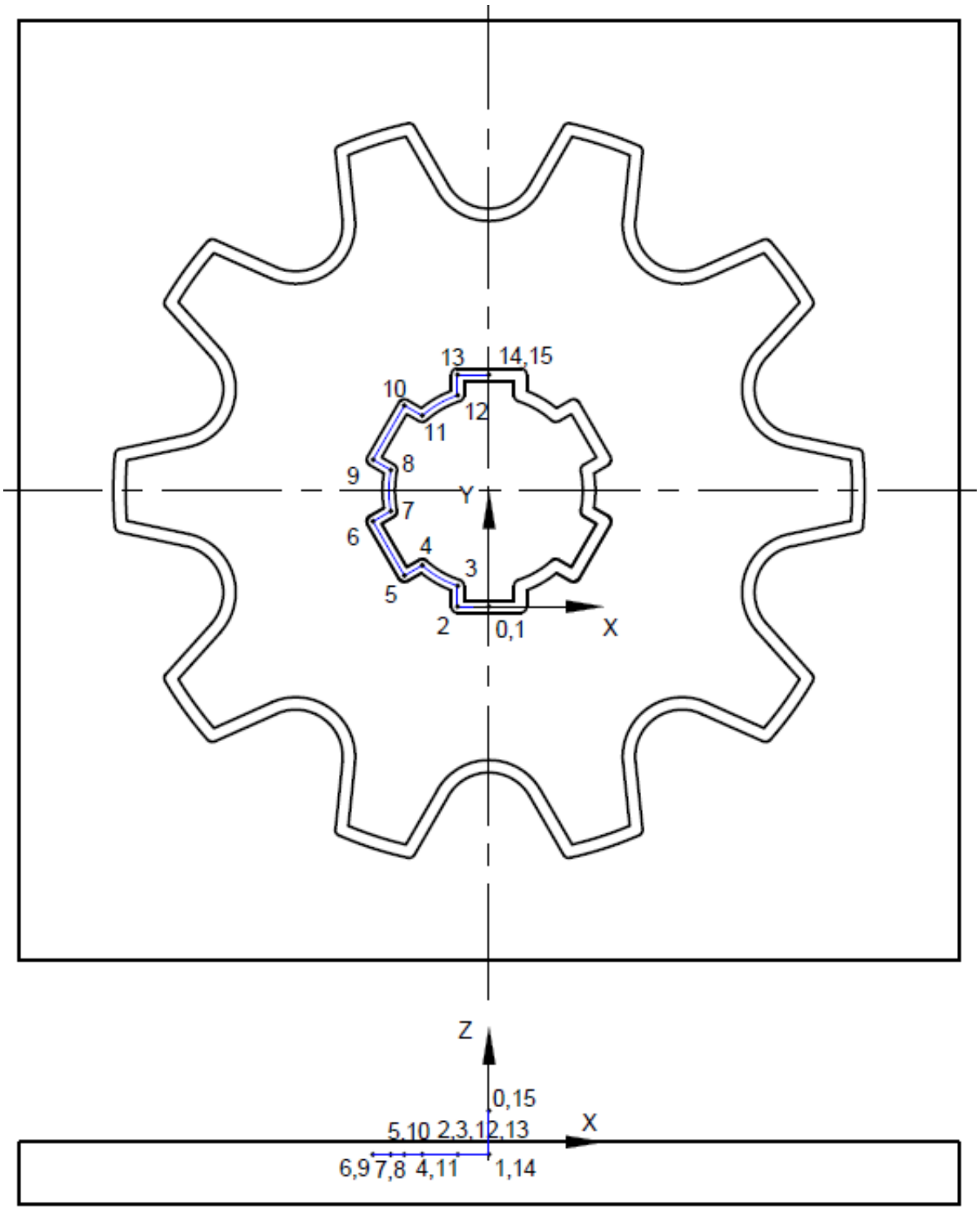
Solution:



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

G1 Z-2
X-5
Y3,301
G2 X-10,662 Y6,571 R16
G1 X-13,521 Y4,92
X-18,521 Y13,58
X-15,662 Y15,231
G2 X-15,662 Y21,769 R16
G1 X-18,521 Y23,42
X-13,521 Y32,08
X-10,662 Y30,429
G2 X-5 Y33,699
G1 Y37
X0
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-5 %Straight milling; point 2

Y3,301 %Straight milling; point 3

G2 X-10,662 Y6,571 R16 %Radial milling; point 4

G1 X-13,521 Y4,92 %Straight milling; point 5

X-18,521 Y13,58 %Straight milling; point 6

X-15,662 Y15,231 %Straight milling; point 7

G2 X-15,662 Y21,769 R16 %Radial milling; point 8

G1 X-18,521 Y23,42 %Straight milling; point 9

X-13,521 Y32,08 %Straight milling; point 10

X-10,662 Y30,429 %Straight milling; point 11

G2 X-5 Y33,699 %Radial milling; point 12

G1 Y37 %Straight milling; point 13

X0 %Straight milling; point 14

Z5 %Lifting of tool; point 15

M30 %End of program