

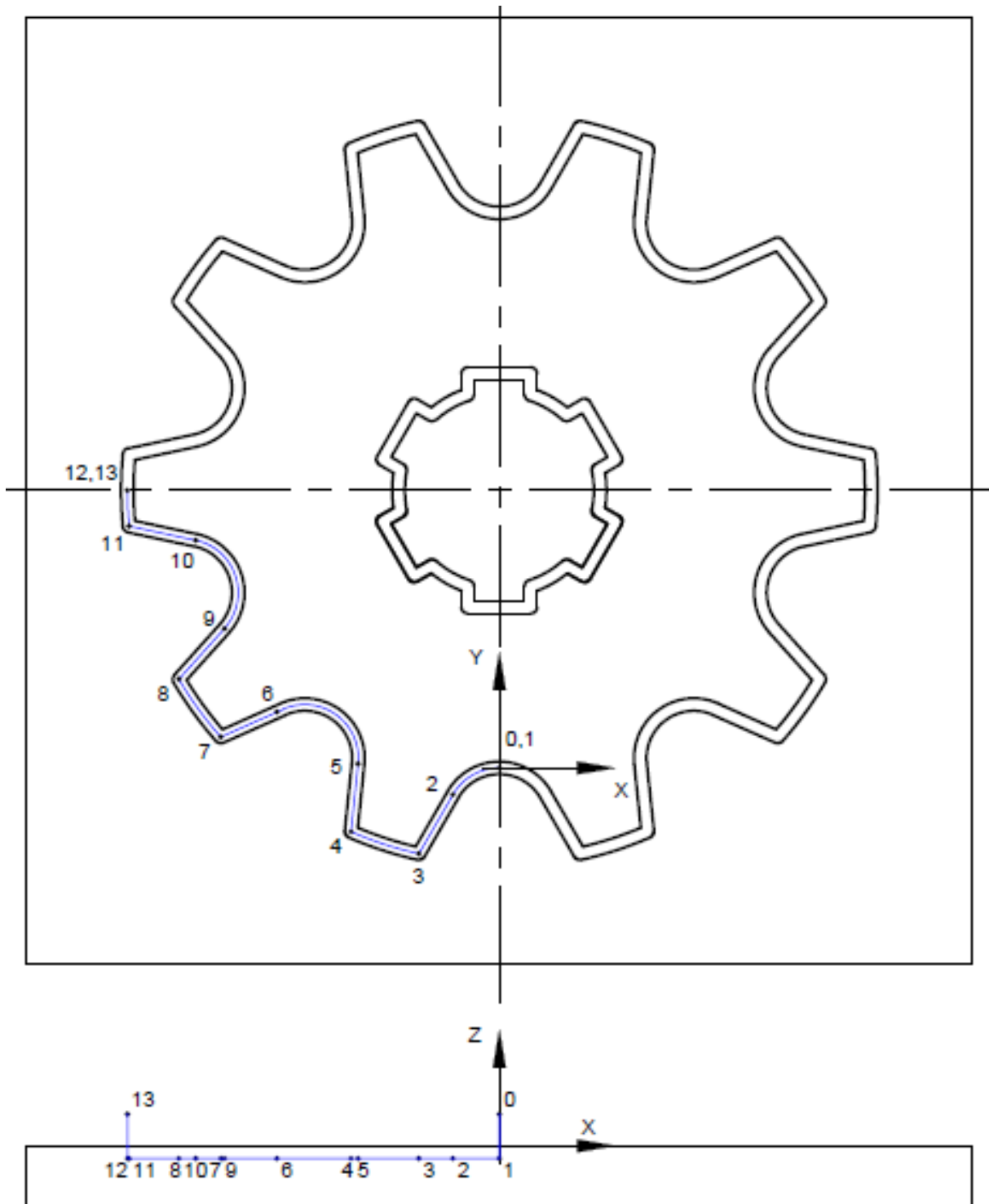
Field of education:
Mechanical engineering

Professional qualification:
CNC operator

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

Variant:
Task 40 – Sprocket 1.4.

Solution:



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

G1 Z-2

G3 X-7,361 Y-4,25 R8,5

G1 X-12,761 Y-13,603

G2 X-23,534 Y-10,103 R59

G1 X-22,405 Y0,638

G3 X-35,289 Y8,859 R8,5

G1 X-44,183 Y4,899

G2 X-50,841 Y14,063 R59

G1 X-43,614 Y22,089

G3 X-48,163 Y36,091 R8,5

G1 X-58,728 Y38,336

G2 X-59 Y44 R59

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

G3 X-7,361 Y-4,25 R8,5 %Radial milling; point 2

G1 X-12,761 Y-13,603 %Straight milling; point 3

G2 X-23,534 Y-10,103 R59 %Radial milling; point 4

G1 X-22,405 Y0,638 %Straight milling; point 5

G3 X-35,289 Y8,859 R8,5 %Radial milling; point 6

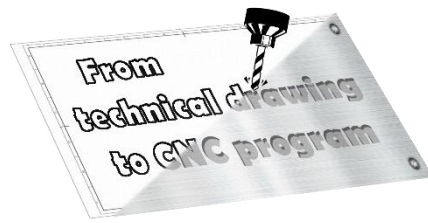
G1 X-44,183 Y4,899 %Straight milling; point 7

G2 X-50,841 Y14,063 R59 %Radial milling; point 8

G1 X-43,614 Y22,089 %Straight milling; point 9

G3 X-48,163 Y36,091 R8,5 %Radial milling; point 10

G1 X-58,728 Y38,336 %Straight milling; point 11



G2 X-59 Y44 R59 %Radial milling; point 12

G1 Z5 %Lifting of tool; point 13

M30 %End of program