Field of education:
Mechanical engineering

Professional qualification:
CNC operator

Exercise:
Programming of CNC machine (solution)

Variant:
Task 58 – Sprocket 5.1.

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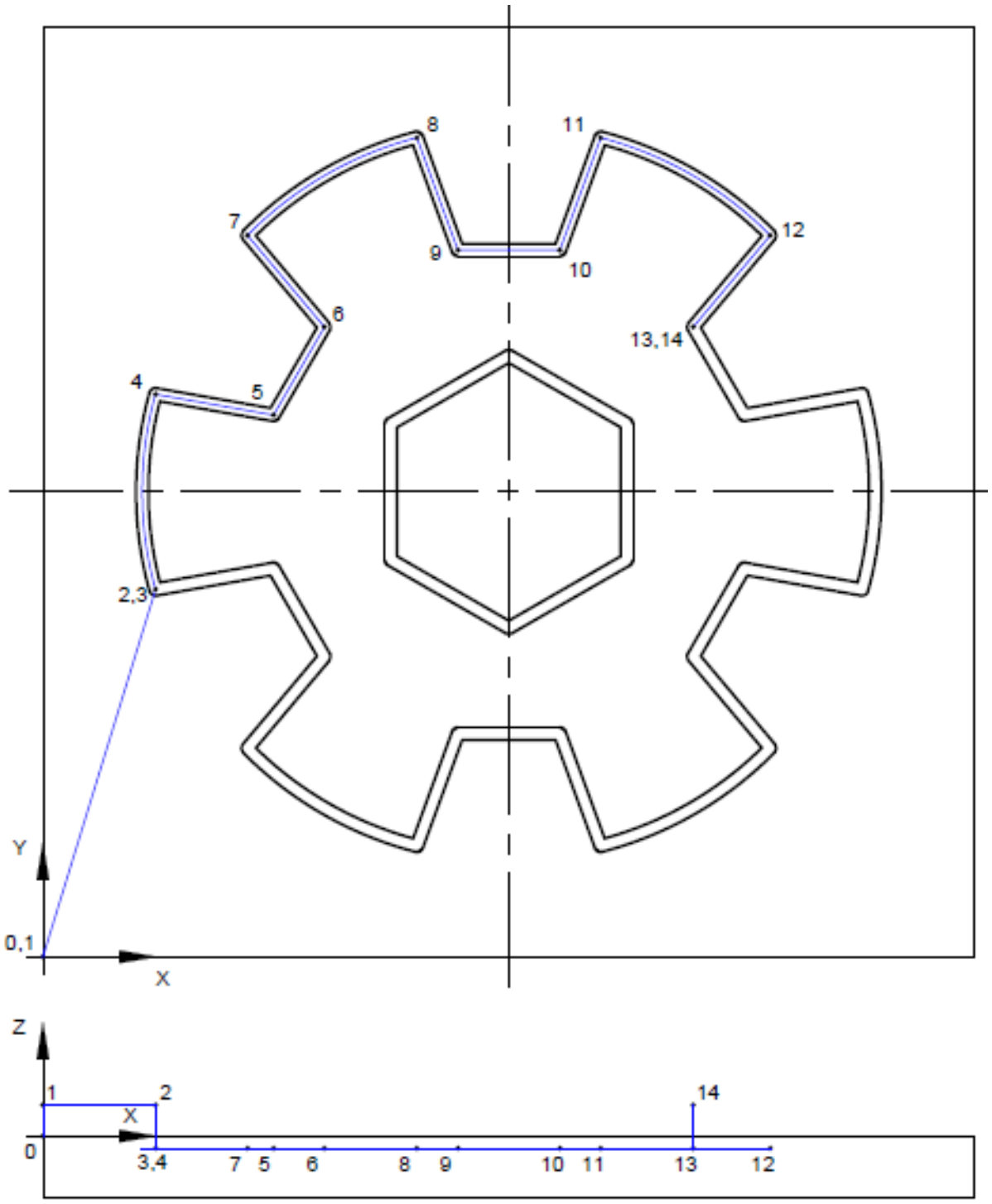
Solution:



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

```
G0 Z5
X18,14 Y59,254
G1 Z-2
G2 Y90,746 R59
G1 X37,125 Y87,398
X45,325 Y101,602
X32,934 Y116,369
G2 X60,206 Y132,115 R59
G1 X66,8 Y114
X83,2
X89,794 Y132,115
G2 X117,066 Y116,369 R59
G1 X104,675 Y101,602
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

X18,14 Y59,254 %Positioning at the starting point; point 2

G1 Z-2 %Tool entry into material; point 3

G2 Y90,746 R59 %Radial milling; point 4

G1 X37,125 Y87,398 %Straight milling; point 5

X45,325 Y101,602 %Straight milling; point 6

X32,934 Y116,369 %Straight milling; point 7

G2 X60,206 Y132,115 R59 %Radial milling; point 8

G1 X66,8 Y114 %Straight milling; point 9

X83,2 %Straight milling; point 10

X89,794 Y132,115 %Straight milling; point 11

G2 X117,066 Y116,369 R59 %Radial milling; point 12

G1 X104,675 Y101,602 %Straight milling; point 13

Z5 %Lifting of tool; point 14

M30 %End of program