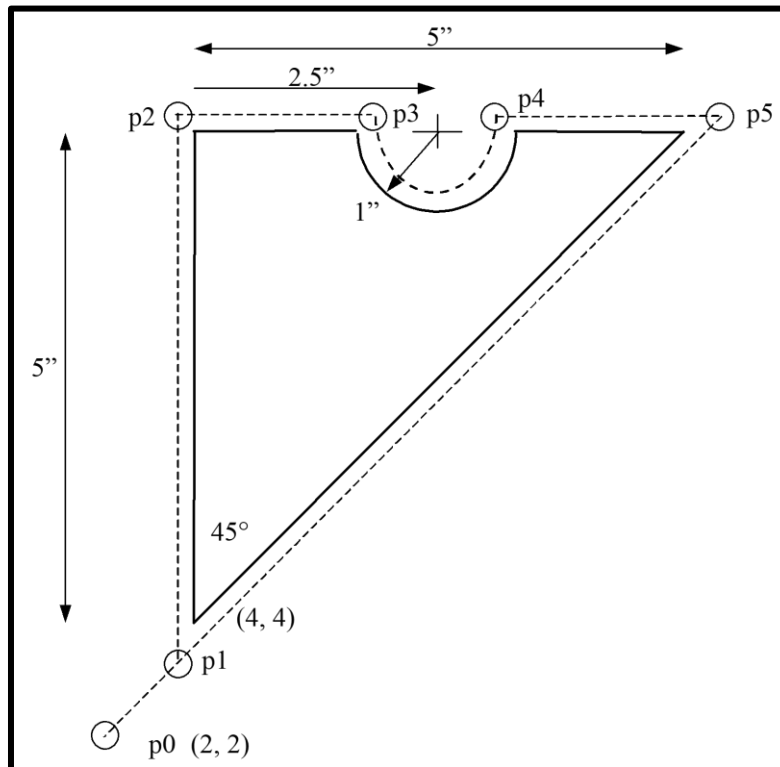


## 6. Cut along circle from p3 to p4



circular interpolation, CCW motion

target coordinates

N060 G03 X7.366 Y9.125 I6.5 J9.0

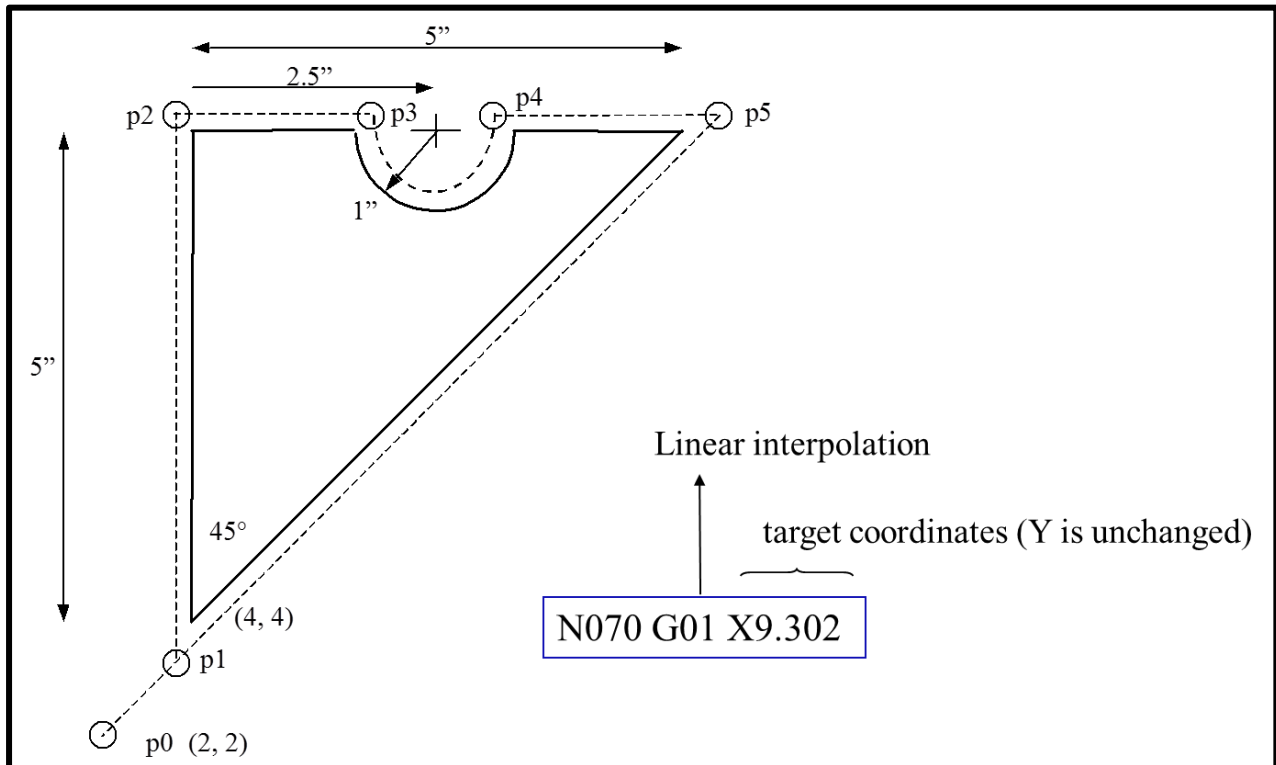
coordinates of center of circle



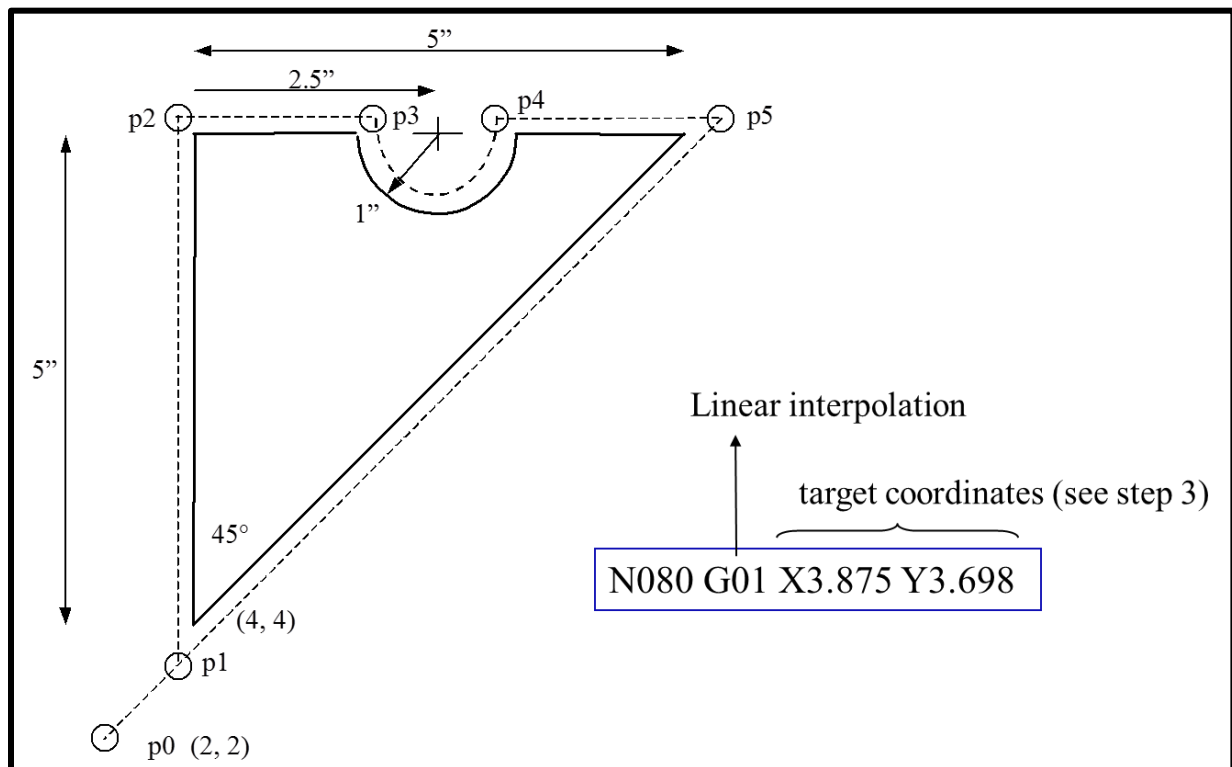
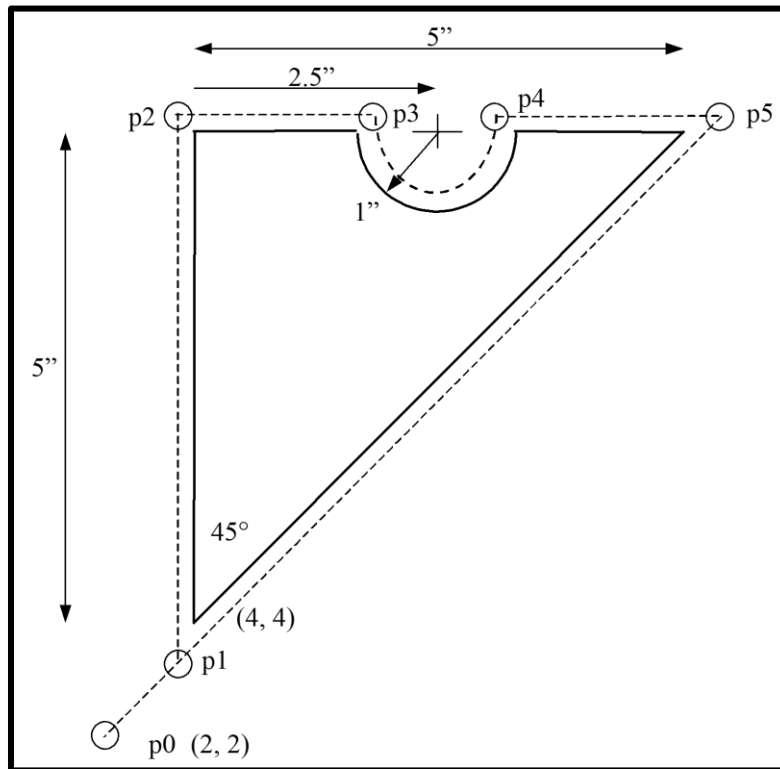
Linear interpolation

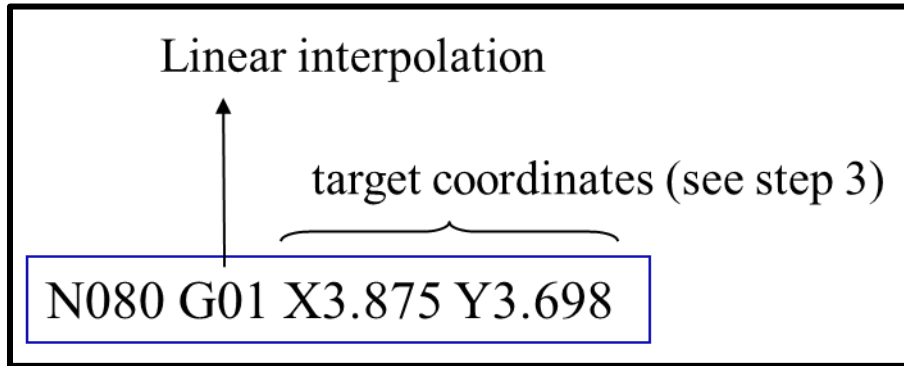
target coordinates (Y is unchanged)

N070 G01 X9.302

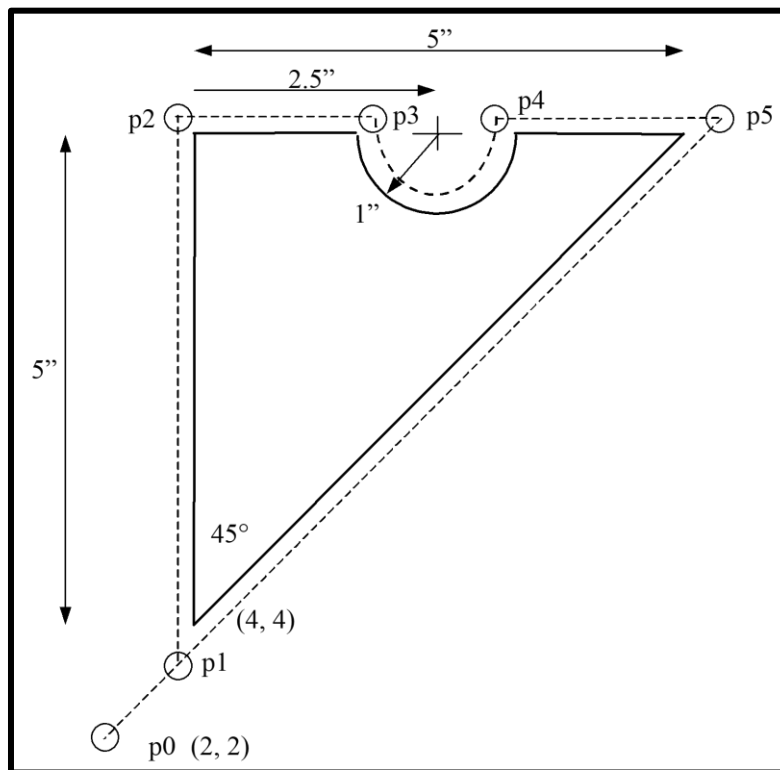


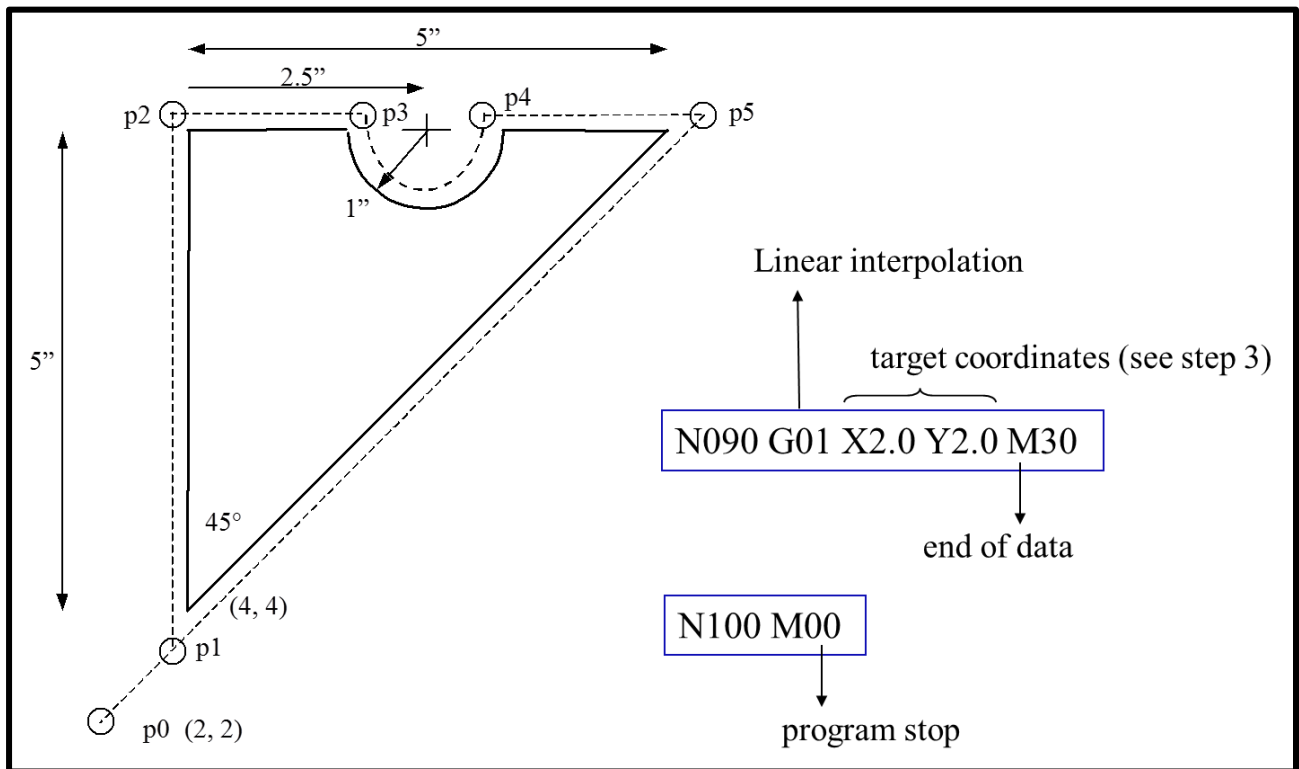
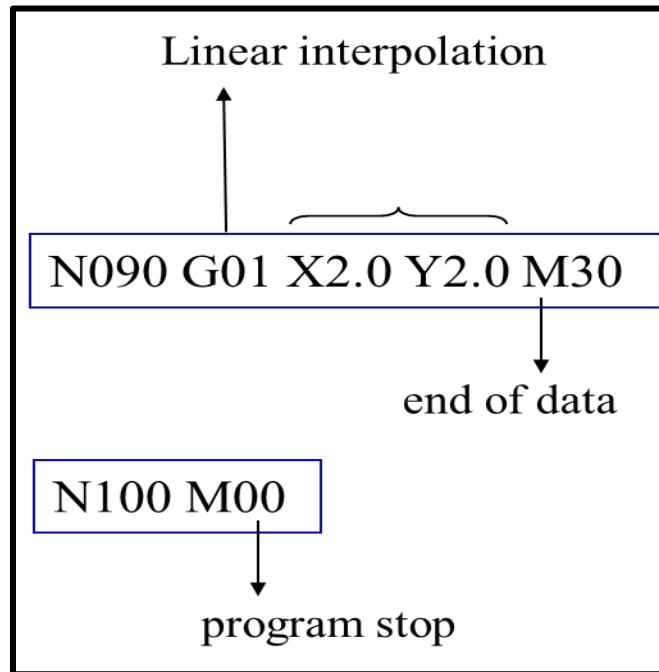
## 8. Cut from p5 to p1





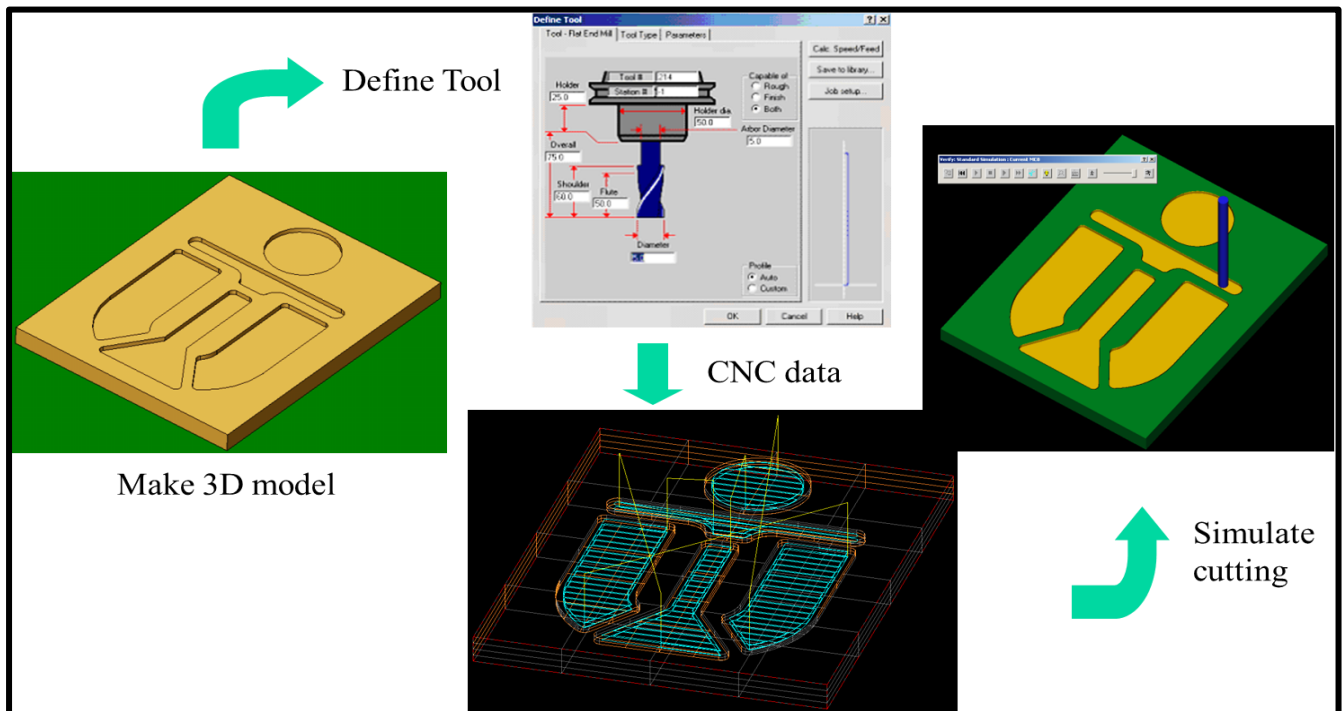
### 9. Return to home position, stop program





## Automatic Part Programming

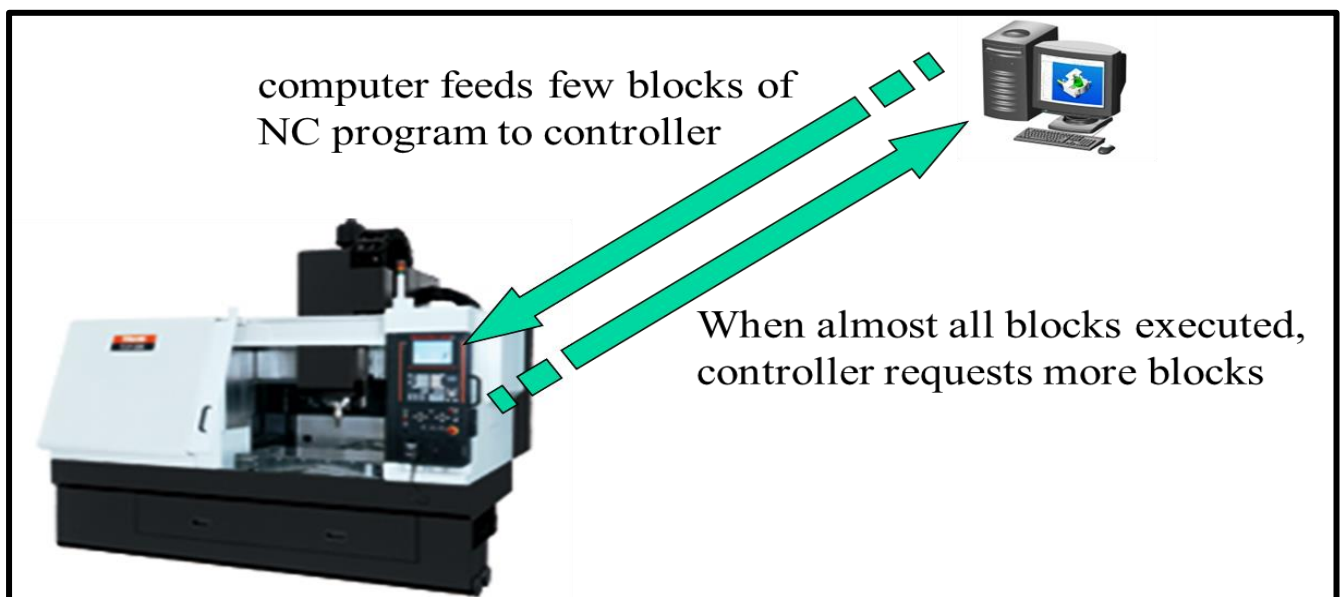
Software programs can automatic generation of CNC data

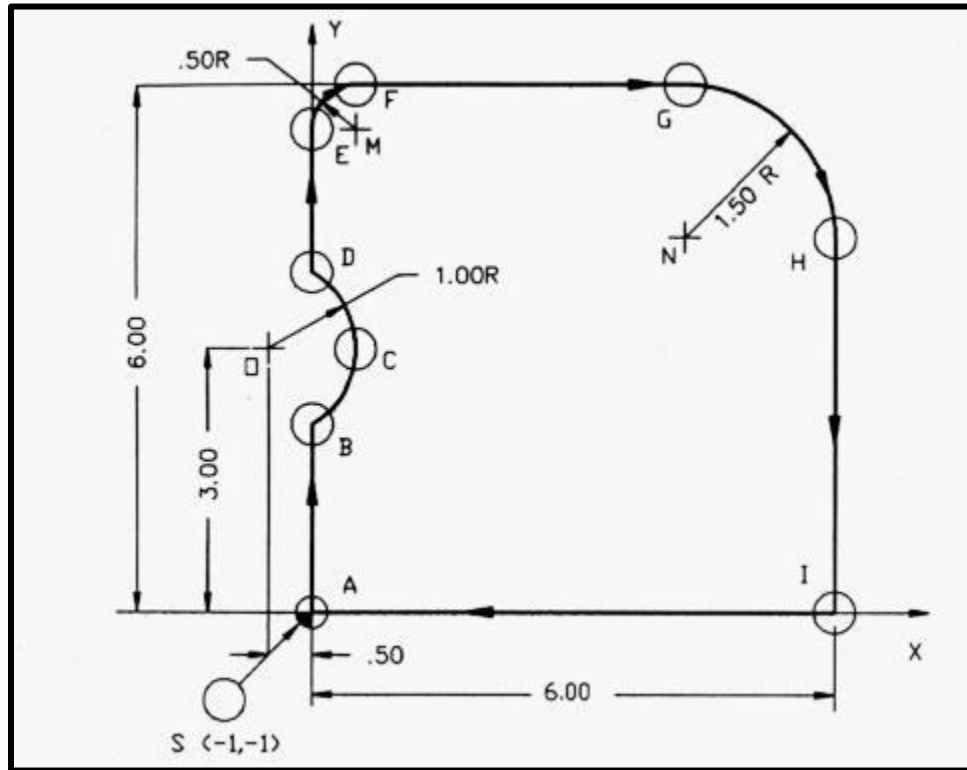


## Automatic part programming and DNC

Very complex part shapes → very large NC program

NC controller memory may not handle HUGE part program





CNC Milling Circular Interpolation G02 G03 G-Code Program Example

```
G90
G00 X-1.0 Y-1.0      ; point S
G01 X0 Y0 F7.5       ; point A
Y2.134               ; point B
G03 X0.5 Y3.0 I-0.5 J0.866 ; point C
X0. Y3.866 I-1. J0   ; point D
G01 Y5.5              ; point E
G02 X0.5 Y6.0 I0.5 J0 ; point F
G01 X4.5              ; point G
G02 X6.0 Y4.5 I0 J-1.5 ; point H
G01 Y0                ; point I
X0                    ; point A
G00 X-1.0 Y-1.0      ; point S
```