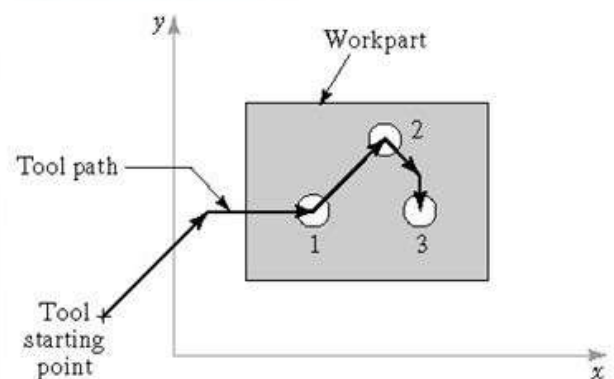


# Motion Control System

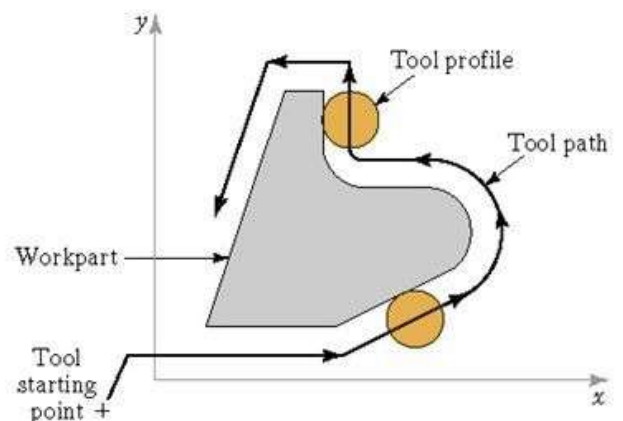
## Point-to-Point systems

- Also called position systems
- System moves to a location and performs an operation at that location (e.g., drilling)
- Also applicable in robotics



## Continuous path systems

- Also called contouring systems in machining
- System performs an operation during movement (e.g., milling and turning)



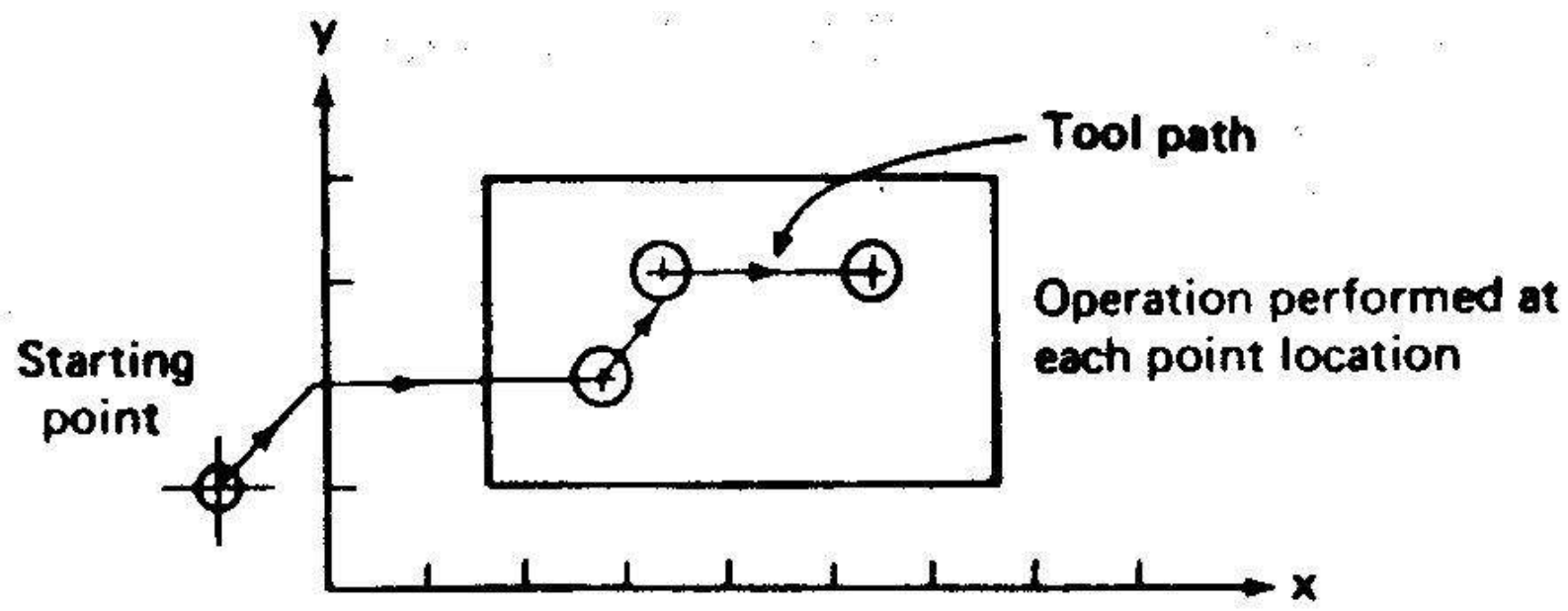
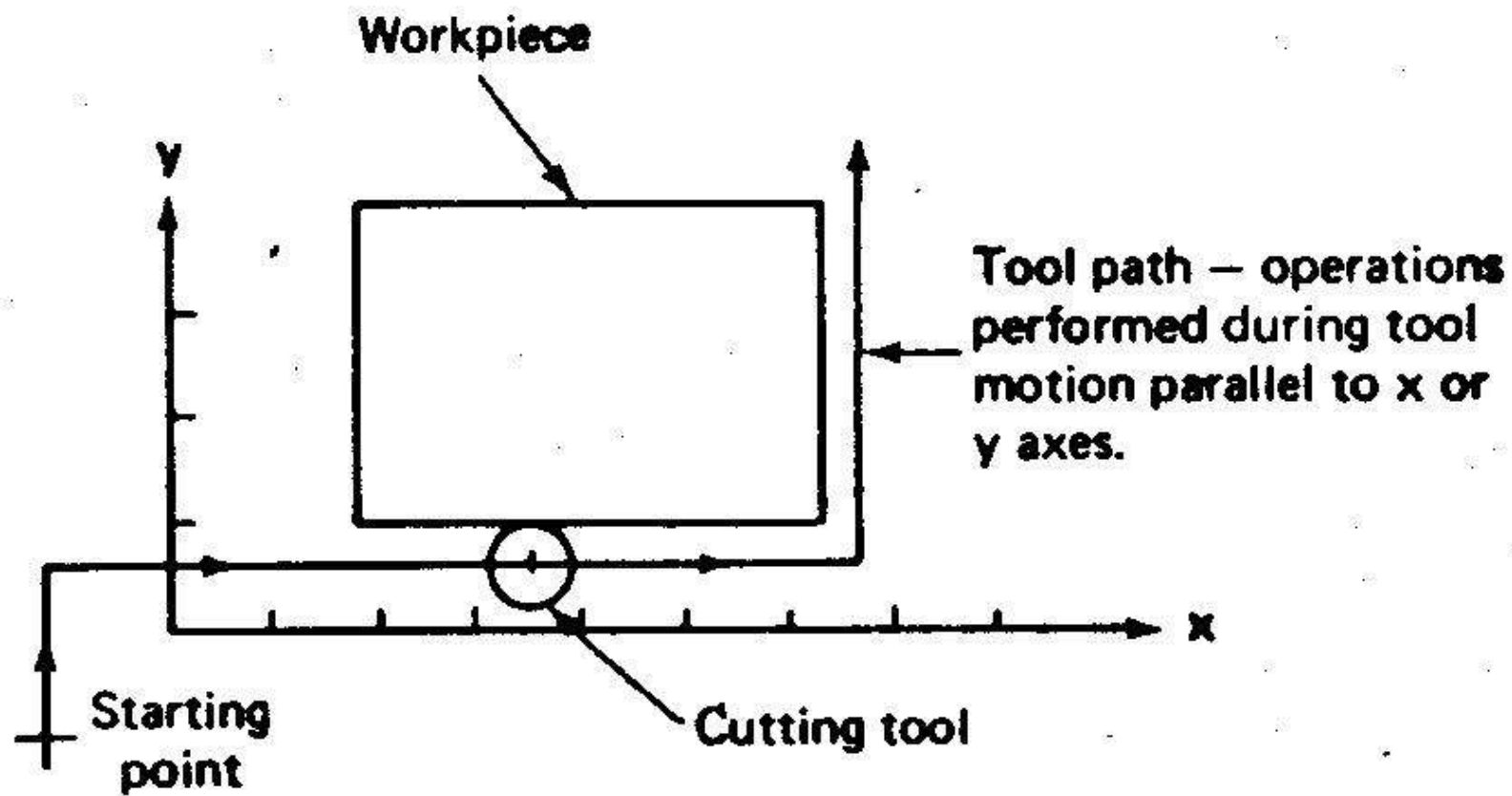


FIGURE 8.5 Point-to-point (positioning) control in NC.



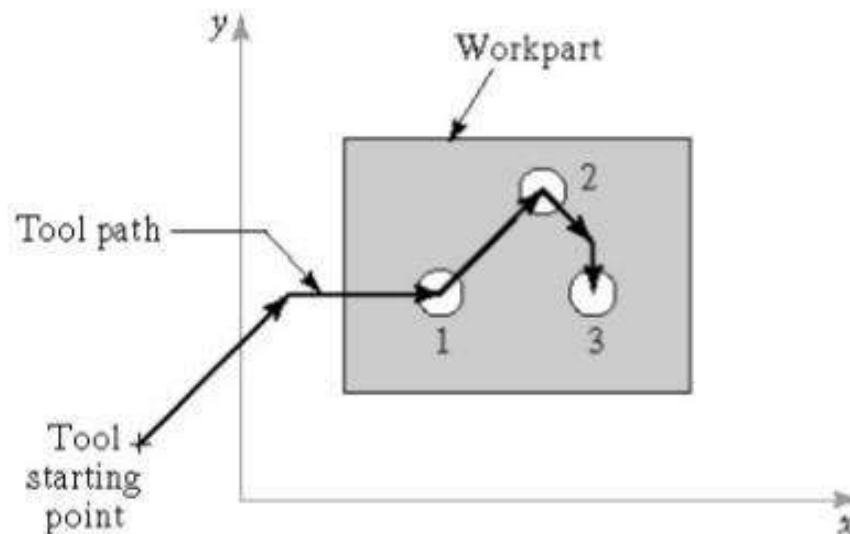
**FIGURE 8.6 .Straight-cut control in NC.**

## Features of motion Control systems

### Point-to-Point Versus Continuous Path Control :

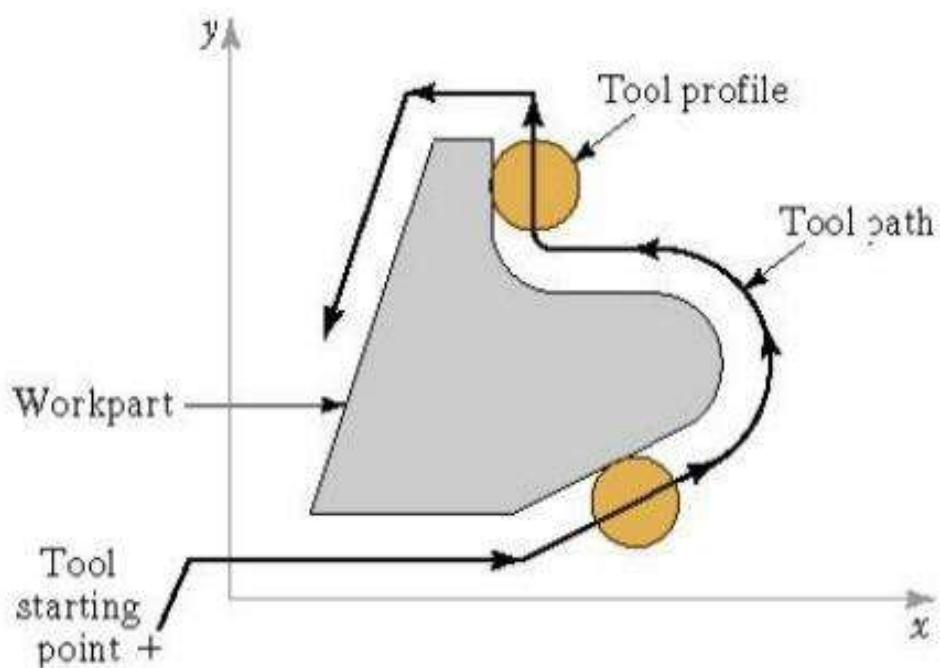
#### 1-Point-to-Point Systems ( positioning Systems ) :

- No regard to the path → Just a series of point locations at which operations are performed .



## 2. Continuous Path Systems :

- The tool trajectory relative to the workpart is controlled → Perform the process while moving .



## Fundamentals of NC technology

Motion Control Systems

Continuous path systems :

(continuous path systems)

```
graph TD; A["(continuous path systems)"] --> B["(Straight - cut NC)"]; A --> C["(Contouring)"]; B --> D["Tool moves parallel to one axis 'only'"]; C --> E["Tool moves relative to two or more axes (simultaneous control)"];
```

(Straight - cut NC)

(Contouring)

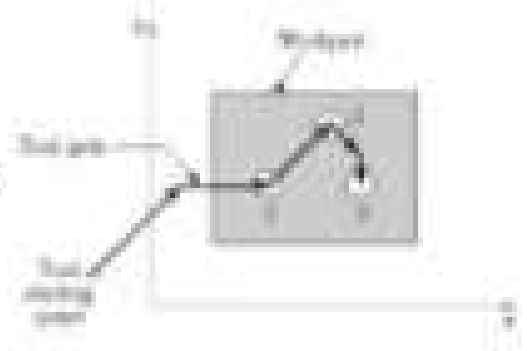
Tool moves parallel to one axis "only"

Tool moves relative to two or more axes (simultaneous control)

# Motion Control Systems

## Point-to-Point systems

- Also called position systems
- System moves to a location and performs an operation at that location (e.g., drilling)
- Also applicable in robotics



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