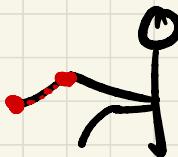


# Improvisation:

Line can be  
straight, curved  
(different genres)

## • Point-Point-Line

- in space
- in other objects
- in body
- Reference frames



graphs

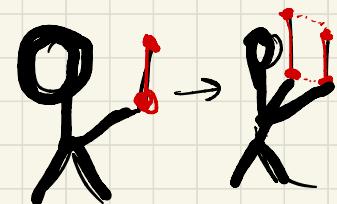
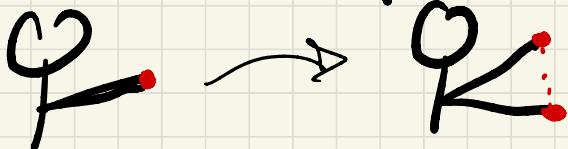
Can be transformed

- translate
- rotate
- scale
- shear

use

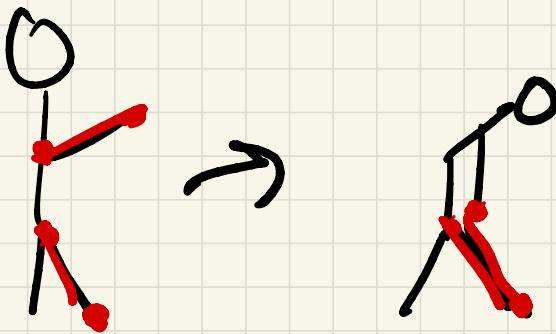
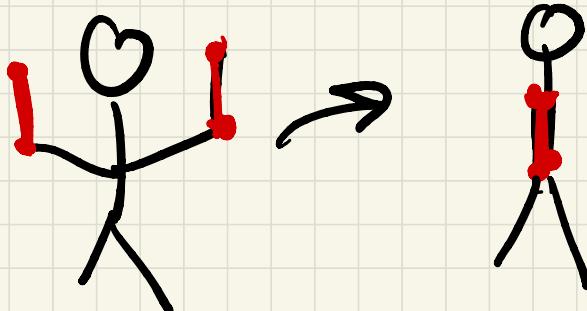
Kinematics  
IK  
FK

• Line can be extruded from a point, plane from a line



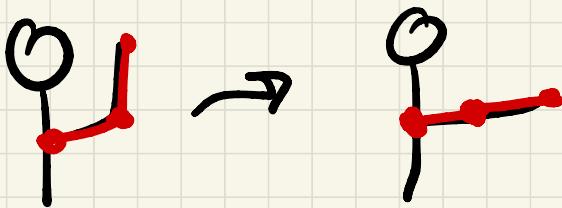
# • Matching

- Lines can be matched to collapse them



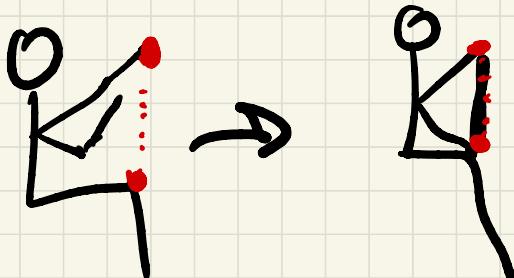
- Can remove line after match
- When collapsed, you can transform lines

- Folding
  - easy way to extend a line



- Bridging

- Connecting points
  - opposed to matching
- can remove points and keep line



# Important: Points on a body

we don't get this for free in robotics, normally do IK for robot and perception for other things

## • Collapsing Points

- Interior relationships (points on body)

- elbows + knees

- between 2 elbows

- " 2 wrists

- finger tips and knees

- hand + head

↑ - hand + wrist

(Every node in a kinematic graph)

includes floors,  
objects, pp's

- Dropping Points
  - collapsing relationships w/  
the floor
  - could lift heel, then  
bring down
  - collapse knees, hands,  
arms, head

- Complex Movements
  - Extending and extruding till  
motions become complex and  
relationships remain clear
  - go through whole body
  - continual line / plane making

- Inclination Extension

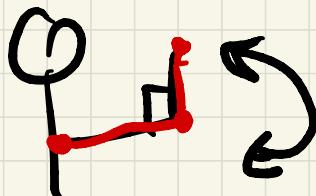
- when line at some angle, it defines an incline to project along in space

“determined by torsions in your body”?



## • Transporting Lines

- keep some relative part of kinematics fixed, vary other things



"/ follow curve to mathematical expansion --"

## • Dropping Curves

- when following curve, you can drop out to form a line w/ new point and collapse



- Parallel Sheer
  - Defines two parallel lines and apply shear
- Approaches
  - Lines exist inside or outside your body
  - When line outside body, you can approach it from many different ways, w)  
many different limbs.

- Angle and Surface
  - Be precise about
    - angle of approach
    - which surface/limb you are approaching line with

- Knotting Exercise
  - adjust body to account for following line
  - sense of flatness in approach



# • Torsions

- twisting due to torque
- "residual body mechanics"



- Avoidance
  - establish line
  - avoid the line
    - By avoiding, you can establish it

- Avoid Volumes
  - feel outside of volume

- Avoid own Body position

- avoid where you were at some stance/pose



- Avoid movement
  - "avoidance modality"
  - take yourself out of the way of something in a motion

- Back Approach
  - not just in front, let movements go to areas all around you

- Lower Limbs

- all lessons apply to legs
  - floor is just as viable as space to establish lines

- From Simple to Complex

- from complex to new modalities

What are different modalities?