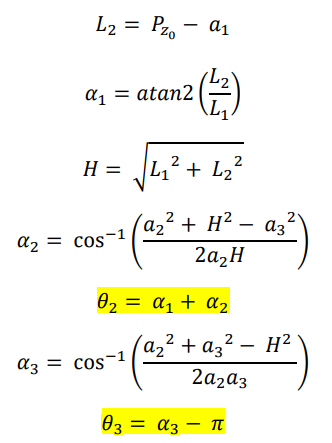
**ROBOTICS CW2**

Diagram, engineering drawing

Description automatically generated

Chart, scatter chart

Description automatically generated



A picture containing text, orange

Description automatically generated

Diagram, engineering drawing

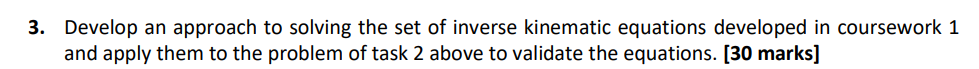
Description automatically generated

Text

Description automatically generated

**Routine**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step number | Action |  |  |  |
| 1 | Choose end tool: Suction cup |  |  |  |
| 2 | Initial positioning of Dobot |  |  |  |
| 3 | Move to object |  |  |  |
| 4 | Grab: Suction cup ON |  |  |  |
| 5 | Lift object up |  |  |  |
| 6 | Move object |  |  |  |
| 7 | Move object down |  |  |  |
| 8 | Drop: Suction cup OFF |  |  |  |
| 9 | Move away from object |  |  |  |
| 10 | Return to initial position |  |  |  |



Initial position of end effector (directly above ROD)

Initial position of end effector mount point (toutching disk)

position of end effector (Above second position )

position of end effector (dropping disk )

Text

Description automatically generated

A path was planned to pick and place disks from the initial rod to the target rod, completing the Tower of Hanoi puzzle. The plan was set to follow the progression of images in Figure \*, as shown below.

Chart

Description automatically generatedChart

Description automatically generated Chart, box and whisker chart

Description automatically generated

Chart, box and whisker chart

Description automatically generatedChart, box and whisker chart

Description automatically generatedChart, box and whisker chart

Description automatically generated

Chart

Description automatically generatedChart

Description automatically generated

Pseudocode was written to match the planned path, as shown below.

#Start of Pseudo code

Position suction cup over rod C

Move suction cup down**,** touching small disk

suction cup ON

Move suction cup up to over rod C

Move suction cup across to over rod A

Move suction cup down

suction cup OFF

Move suction cup up to over rod A

Move suction cup up to over rod C

Move suction cup down**,** touching medium disk

suction cup ON

Move suction cup up to over rod A

Move suction cup across to over rod B

Move suction cup down

suction cup OFF

Move suction cup up to over rod B

Move suction cup across to over rod A

Move suction cup down**,** touching small disk

suction cup ON

Move suction cup up to over rod A

Move suction cup across to over rod B

Move suction cup down

suction cup OFF

Move suction cup up to over rod B

Move suction cup across to over rod C

Move suction cup down**,** touching large disk

suction cup ON

Move suction cup up to over rod C

Move suction cup across to over rod A

Move suction cup down

suction cup OFF

Move suction cup up to over rod A

Move suction cup across to over rod B

Move suction cup down**,** touching small disk

suction cup ON

Move suction cup up to over rod B

Move suction cup across to over rod C

Move suction cup down

suction cup OFF

Move suction cup up to over rod C

Move suction cup across to over rod B

Move suction cup down**,** touching medium disk

suction cup ON

Move suction cup up to over rod B

Move suction cup across to over rod A

Move suction cup down

suction cup OFF

Move suction cup up to over rod A

Move suction cup across to over rod C

Move suction cup down**,** touching small disk

suction cup ON

Move suction cup up to over rod C

Move suction cup across to over rod A

Move suction cup down

suction cup OFF

Move suction cup up to over rod A

#End of Pseudo code

Text

Description automatically generated with medium confidence