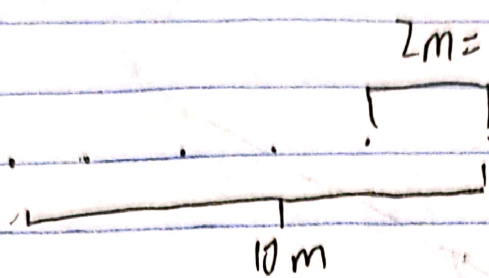


goal: find $\begin{bmatrix} 8 \times 1 \\ [\Delta L, \text{time}] \\ \vdots \\ [\Delta L, \text{time}] \end{bmatrix} \times 8$ (8 point)

\uparrow \uparrow
 平均 ΔL of cable duration per

duration = 10s
 时长/总长
 $\# \text{ dots} = \Delta \text{Pos} / \text{resolution}$
 \uparrow \uparrow
 总长 每段长
 $\text{duration per} = \text{duration} / \# \text{ dots}$
 \uparrow
 点到点时长

ex.



2m = resolution duration = 10s

$10/2 = 5$ section / six point
 $\text{duration per} = 10/5 = 2s$

break down approach input: (cur P3, cur Ori, des P3, des Ori, duration)
 (back pass)

coord 2 box (des P3, des Ori)

return a 8×3 box point

1×3 0 1×3
 prev \downarrow \downarrow current
 $P^2 \text{ length } (0 \text{ to } 10)$

return the change of length

a-b

output: $\left[\begin{array}{c} \text{Section matrix } [\Delta L, \text{time}] \\ \vdots \\ \vdots \end{array} \right] \times n$

8

2. Find length of cable with $[X, Y, Z]$ ✓

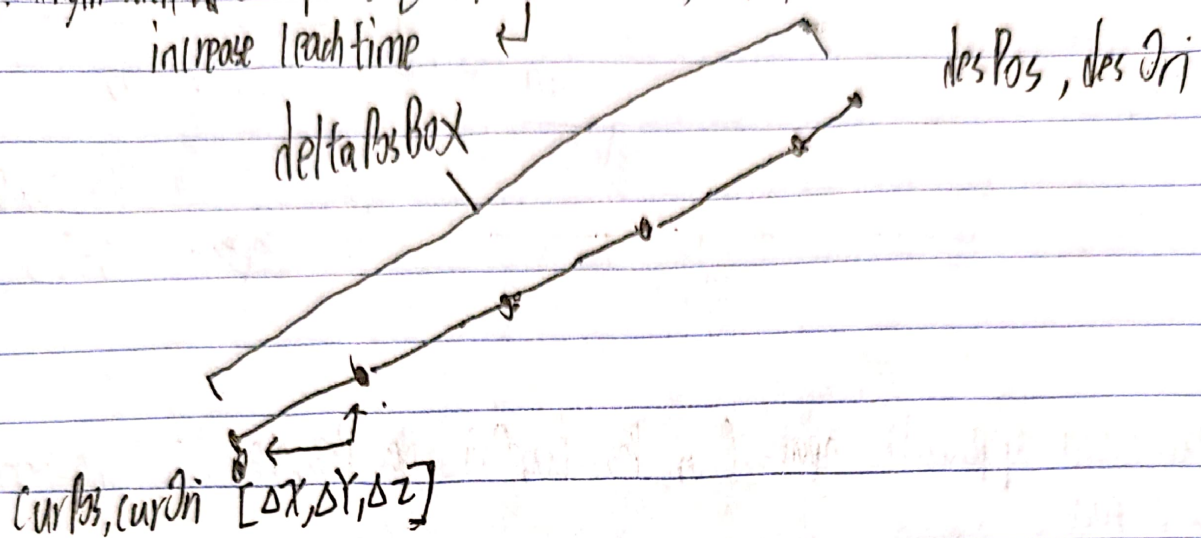
repeat eight times 111

1. Find delta Pos Box $[\Delta X_t, \Delta Y_t, \Delta Z_t]$ ✓

2. Find section/numDts (5 in this case) ✓

3. Find $[\Delta X, \Delta Y, \Delta Z]$ for each section/between points ✓

4. length with each point $[X + \#numDts \Delta X, Y + \#numDts \Delta Y, Z + \#numDts \Delta Z]$
increase each time ←



what if numDts is a non-integer?

for n in range(numDts)

curBox(i) of de

curBox(i) + deltaXYZ(i) * n