

Car Fleet \rightarrow II

$$\begin{array}{l}
 \text{Pos} \rightarrow 5 \mid 5 \mid 6 \mid 9 \\
 \text{speed} \rightarrow 4 \mid 4 \mid 3 \mid 1 \\
 \text{collision time} \rightarrow \cancel{2} \mid 1 \mid 1.5 \mid -1
 \end{array}$$

is these any cars ahead of me, with which I can collide

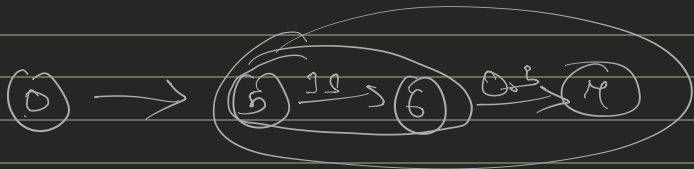
$$2^{\text{nd}} \text{ Car} \rightarrow \frac{9-6}{3-1} = \frac{3}{2} = 1.5 \text{ s}$$

$$1^{\text{st}} \text{ Car} \rightarrow \frac{6-5}{4-3} = \frac{1}{1} = 1 \text{ s}$$

$$(1) \xrightarrow{1 \text{ sec}} (2) \xrightarrow{0.5} (3)$$

$$0^{\text{th}} \text{ Car} \rightarrow 1^{\text{st}} \frac{5-3}{0} = \infty$$

$$0^{\text{th}} \text{ Car} \rightarrow 2^{\text{nd}} = \frac{6-3}{4-3} = 3 \text{ sec}$$



$$0^{\text{th}} \text{ Car} \rightarrow 3^{\text{rd}} \Rightarrow \frac{9-3}{4-1} = \frac{6}{3} = 2$$

Stack solution \rightarrow

Pos \rightarrow 3 | 5 | 6 | 9
 speed \rightarrow 4 | 4 | 5 | 1
 time \rightarrow 3 | 2 | 1 | 1.5 | -1

3rd Car \rightarrow s.push(5)

2nd Car \rightarrow bcz car ahead of me is slower

$$\rightarrow \frac{9-6}{5-1} = 1.5$$

1st Car $\rightarrow \frac{6-5}{4-3} = 1 \Rightarrow$ if (Car Col Time \leq stop time)
 if Car Col time = 1.5

0th Car \rightarrow stop \geq speed \geq Car pop'd
 pop()

y

if (Car Col Time $>$ stop time) if

pop

↓

$$\frac{9-3}{4-1} = \frac{6}{3} = 2$$

Best solution with Array

Pop	
1st Car time	
2nd Car time	
3 rd Car time	