

① Transport

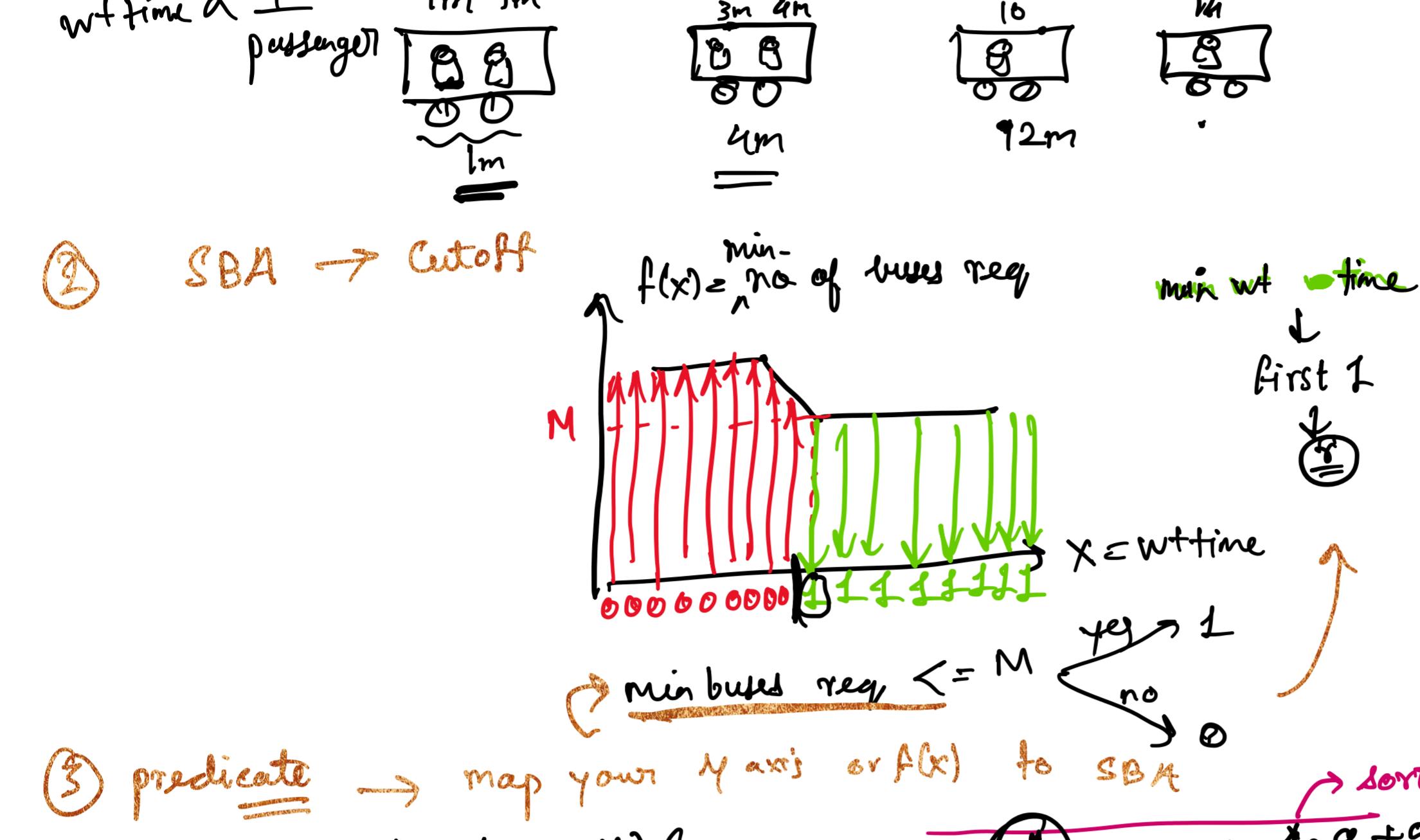
Alg D Transport Services
N passengers \Rightarrow [8 8 8 9 8 8] 1m 2m 10m 14m 4m 3m

$M=3$, $C=2$

$$8m - 4m = 4m$$

$M \times C \geq N$
total capacity no. of people who have arrived

smallest possible value of MINIMUM MAXIMUM waiting time of passengers.



Sort wt. time & find least wt. time?
1, 1, 3, 4, 10, 14 16 pass., M=3, C=2

MINIMAX MAXIMIN Monotonically ↑ or ↓ for SBA → Binary Search

② Check how your ans is progressing?
monotonically ↓

wt. time-fixed no. of ppl - fixed capacity - fixed buses

$f(x) = \text{no. of bus req}$

wt. time = 3
wt. time of 1 passenger [1m 1m] 1, 1, 3, 4, 10, 14

wt. time = 4
wt. time of 2 passengers [3m 4m] 3m 4m 10 14

wt. time = 5
wt. time of 3 passengers [10] 10

wt. time = 6
wt. time of 4 passengers [14] 14

wt. time = 7
wt. time of 5 passengers [14] 14

wt. time = 8
wt. time of 6 passengers [14] 14

wt. time = 9
wt. time of 7 passengers [14] 14

wt. time = 10
wt. time of 8 passengers [14] 14

wt. time = 11
wt. time of 9 passengers [14] 14

wt. time = 12
wt. time of 10 passengers [14] 14

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wt. time of 11 passengers [14] 14

wt. time = 14
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wt. time = 118