SYSC3303B

Tutorial B1

GROUP 1

ITERATION 0

Assumption:

- The elevator takes about *a floor height* to accelerate/decelerate.

Max speed:

- `t` = (time travelled for 3 floors) - (time travelled for 2 floors)

  `= 1.13 m/s`

Acceleration/Deceleration:

- $\delta t = 5.43s$
- $\delta v = v_2 = 1.13m/s$
- $a = (1.13m/s)/(5.43s) = 0.21m/s^2$

The average loading time (s):

`f(x) = 1.5x + 8` where `x` is the number of passengers

The average unloading time (s):

`f(x) = 1.1x + 7.7` where `x` is the number of passengers