Used to find the approximate area of an irregular shape

Pg 12
Log tables
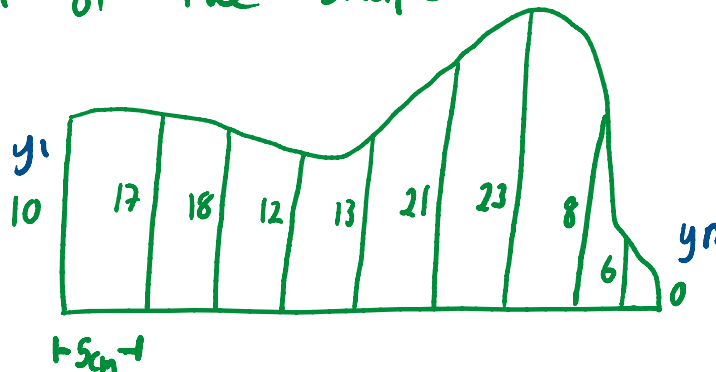
Note y= height
         h= width

y_1 y_2 y_3 y_4 .... y_n

← h →
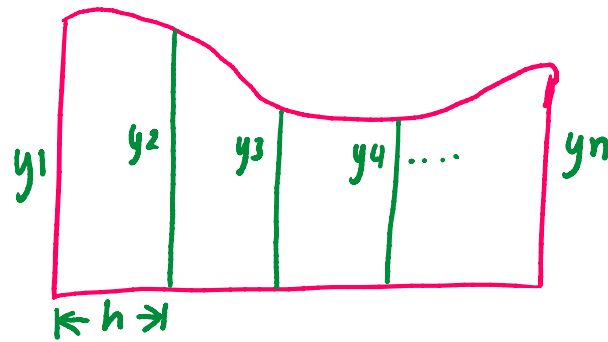
Area= $\frac{h}{2}\left[y_1+y_n+2\left(y_2+y_3+y_4+y_{n-1}\right)\right]$

Formula in words = $\frac{width}{2}\left[First\ height+last\ height+2\left(sum\ of\ all\ other\ heights\right)\right]$

Eg1) Use the trapezoidal rule to find the area of the shape

y_1
10   17   18   12   13   21   23   8   6 y_n
                                                0

← 5cm →

Area= $\frac{h}{2}\frac{5}{2}\left[\overset{y_1}{10}+\overset{y_n}{0}+2\left(17+18+12+13+21+23+8+6\right)\right]$

Calculator

Area = 615 cm^2

H/W Pg 268 Q1