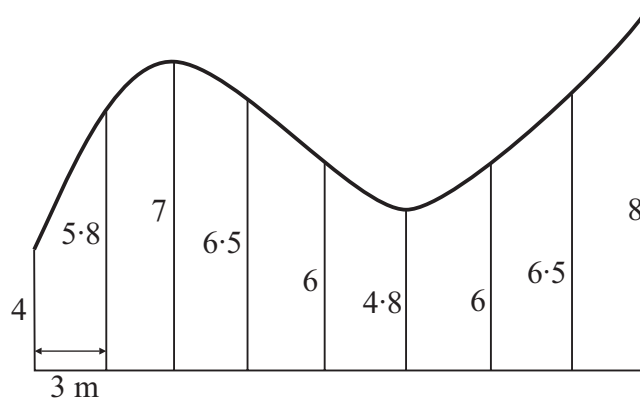


## LC 2017: PAPER 1

### QUESTION 5 (25 MARKS)

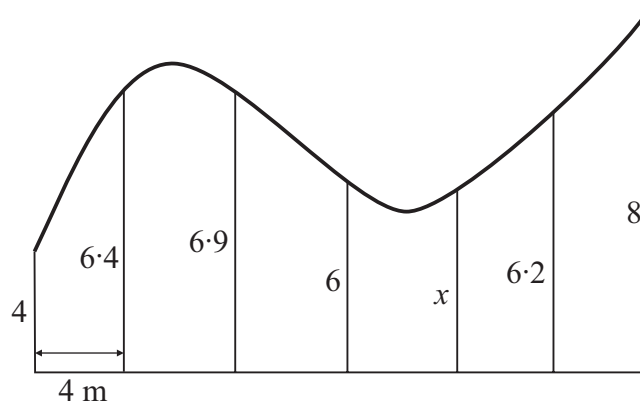
Trapezoidal rule:  $\text{Area} \approx \frac{h}{2}[y_1 + y_n + 2(y_2 + y_3 + \dots + y_{n-1})]$

#### Question 5 (a)



$$\text{Area } A \approx \frac{3}{2}[4 + 8 + 2(5.8 + 7 + 6.5 + 6 + 4.8 + 6 + 6.5)] = 145.8 \text{ m}^2$$

#### Question 5 (b)



$$\text{Area } A \approx \frac{4}{2}[4 + 8 + 2(6.4 + 6.9 + 6 + x + 6.2)] = 145.6 \text{ m}^2$$

$$2[12 + 2(x + 25.5)] = 145.6$$

$$12 + 2(x + 25.5) = 72.8$$

$$2(x + 25.5) = 72.8 - 12$$

$$2(x + 25.5) = 60.8$$

$$x + 25.5 = 30.4$$

$$x = 30.4 - 25.5 = 4.9 \text{ m}$$