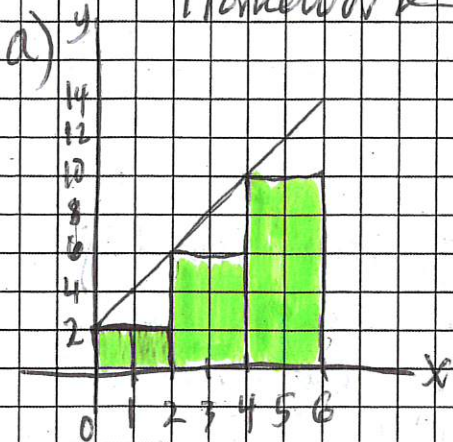


Homework 10A

1)



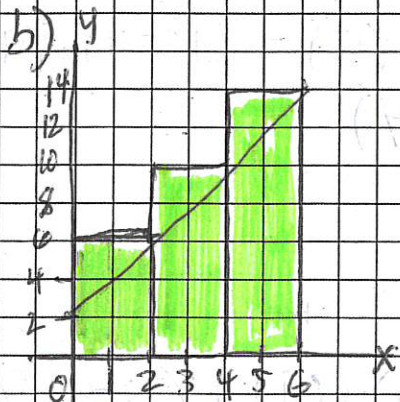
Left Sum $A = \sum_{i=1}^n b_i \cdot h_i$

$$A = (2-0)f(0) + (4-2)f(2) + (6-4)f(4)$$

$$= 2(2) + 2(6) + 2(10)$$

$$= 4 + 12 + 20$$

$A = 36$



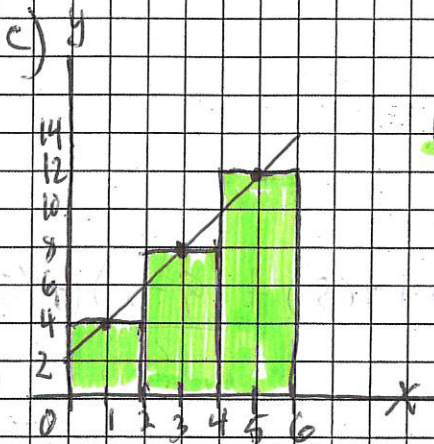
Right Sum $A = \sum_{i=1}^n b_i \cdot h_i$

$$A = (2-0)f(2) + (4-2)f(4) + (6-4)f(6)$$

$$= 2(6) + 2(10) + 2(14)$$

$$= 12 + 20 + 28$$

$A = 60$



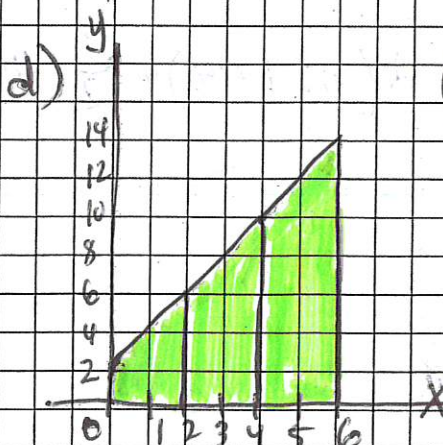
Midpoint Sum $A = \sum_{i=1}^n b_i \cdot h_i$

$$A = (2-0)f(1) + (4-2)f(3) + (6-4)f(5)$$

$$= 2(4) + 2(8) + 2(12)$$

$$= 8 + 16 + 24$$

$A = 48$



Trapezoidal Sum $A = \sum_{i=1}^n \frac{h}{2} (b_1 + b_2)$

$$A = \left(\frac{2-0}{2}\right)(f(0)+f(2)) + \left(\frac{4-2}{2}\right)(f(2)+f(4)) + \dots$$

$$\dots + \left(\frac{6-4}{2}\right)(f(4)+f(6))$$

$$A = 1(2+6) + 1(6+10) + 1(10+14)$$

$A = 48$

④ a) $A = 32.8$

b) $A = 19.3$

c) $A = 26.05$

⑤ a) $A = 229$

b) The meaning of $\int_0^{40} v(t) dt$ means the displacement of the plane's flight. The plane was displaced upward 229 miles over the time interval $0 \leq t \leq 40$ minutes.

③ a) left

$$\Delta x = b - a$$

$$A = \sum_{i=1}^n f(c_i) \Delta x$$

$$= f(0)(2-0) + f(2)(5-2) + f(5)(9-5) + f(9)(10-9)$$

$$= 66(2) + 60(3) + 52(4) + 44(1)$$

$$A = 564$$

b) Right

$$A = f(2)(2-0) + f(5)(5-2) + f(9)(9-5) + f(10)(10-9)$$

$$= 60(2) + 52(3) + 44(4) + 43(1)$$

$$A = 495$$

c) Trapezoidal $A = \frac{h}{2} (b_1 + b_2)$

$$A = \frac{(2-0)}{2} (f(0) + f(2)) + \frac{(5-2)}{2} (f(2) + f(5)) + \frac{(9-5)}{2} (f(5) + f(9))$$

$$+ \frac{(10-9)}{2} (f(9) + f(10)) = 1(66+60) + \frac{3}{2}(60+52) + 2(52+44) + \frac{1}{2}(44+43) = 529.5$$

DATE:

CLASS/PERIOD:

NAME:

TOPIC/OBJECTIVE:

FOCUSSED NOTES

AVTD
Proven Achievement
Lifetime Advantage

ESSENTIAL QUESTION: