

6.9 WMUP: Area Under the Curve Quiz Review

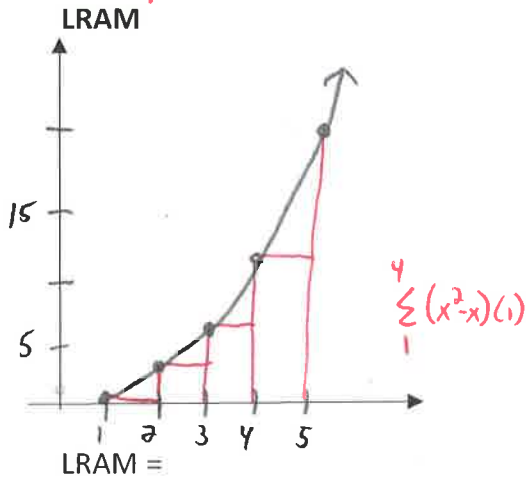
Name: _____

Given: ~~_____~~

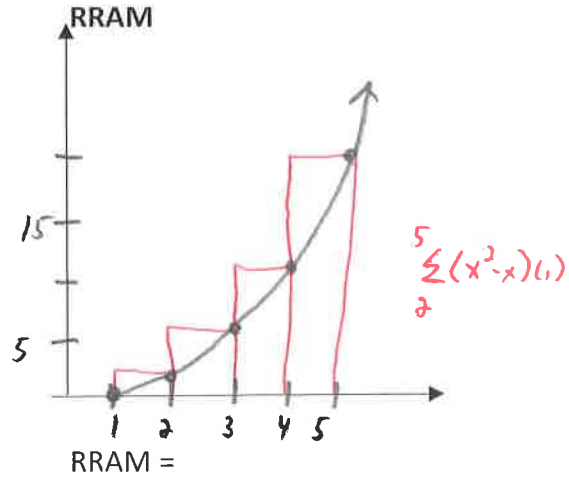
$y = x^2 - x$ $[1, 5]$ $n = 4$

X	1	2	3	4	5
f(x)	0	2	6	12	20

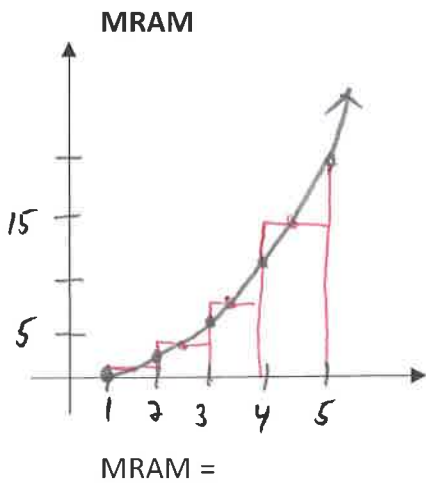
$\Delta x = \frac{5-1}{4} = 1$ $\left\{ \sum_{i=1}^5 (x^2 - x) \Delta x \right.$



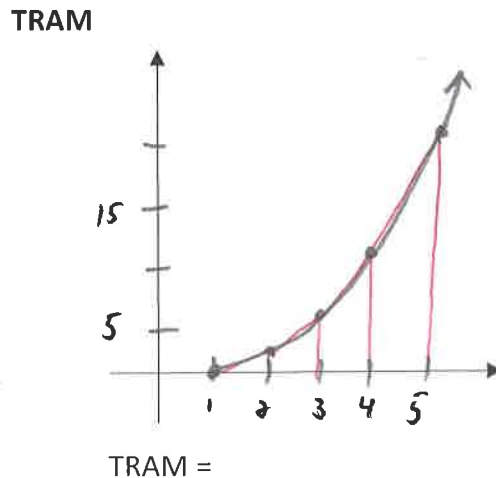
$= 1 \cdot f(1) + 1 \cdot f(2) + 1 \cdot f(3) + 1 \cdot f(4)$
 $= 0 + 2 + 6 + 12$
 $= \boxed{20 \text{ u}^2}$



$= 1 \cdot f(2) + 1 \cdot f(3) + 1 \cdot f(4) + 1 \cdot f(5)$
 $= 2 + 6 + 12 + 20$
 $= \boxed{40 \text{ u}^2}$



$= 1 \cdot f(1.5) + 1 \cdot f(2.5) + 1 \cdot f(3.5) + 1 \cdot f(4.5)$
 $= .75 + 3.75 + 8.75 + 15.75$
 $= \boxed{29 \text{ u}^2}$



$= \frac{1}{2} (f(1) + 2 \cdot f(2) + 2 \cdot f(3) + 2 \cdot f(4) + f(5))$
 $= \frac{1}{2} (0 + 2 \cdot (2) + 2 \cdot (6) + 2 \cdot (12) + 20)$
 $= \frac{1}{2} (0 + 4 + 12 + 24 + 20)$
 $= \frac{1}{2} (60) = \boxed{30 \text{ u}^2}$