

INSTITUTO TECNOLÓGICO
SUPERIOR DE
SAN ANDRÉS TUXTLA

ING. GESTION EMPRESARIAL

CÁLCULO INTEGRAL

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Ejercicio

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Calcular el área 4 y 8 rectángulos por la izq. y derecha.

$$f(x) = x^2$$

$$b = 3$$

$$a = 1$$

$$\Delta x = \frac{b-a}{n} = \frac{3-1}{4} = 0.5$$

$$8 = 0.25$$

$$x \quad 1 \quad 1.5 \quad 2 \quad 2.5 \quad 3$$

$$y \quad 1 \quad 2.25 \quad 4 \quad 6.25 \quad 9$$

$$x^2$$

$$1^2 = 1 \times 0.5 = 0.5$$

$$1.5^2 = 2.25 \times 0.5 = 1.125$$

$$2^2 = 4 \times 0.5 = 2$$

$$2.5^2 = 6.25 \times 0.5 = 3.125$$

$$3^2 = 9 \times 0.5 = 4.5$$

$$C_{IZQ} = 6.75 u^2$$

$$C_{DER} = 10.75 u^2$$

$$x \quad 1 \quad 1.25 \quad 1.5 \quad 1.75 \quad 2 \quad 2.25 \quad 2.5 \quad 2.75 \quad 3$$

$$y \quad 1 \quad 1.56 \quad 2.25 \quad 3.06 \quad 4 \quad 5.06 \quad 6.25 \quad 7.56 \quad 9$$

$$1^2 = 1 = 0.25$$

$$1.25^2 = 1.5625 = 0.390625$$

$$1.5^2 = 2.25 = 0.56$$

$$1.75^2 = 3.0625 = 0.7656$$

$$2^2 = 4 = 1$$

$$2.25^2 = 5.0625 = 1.2656$$

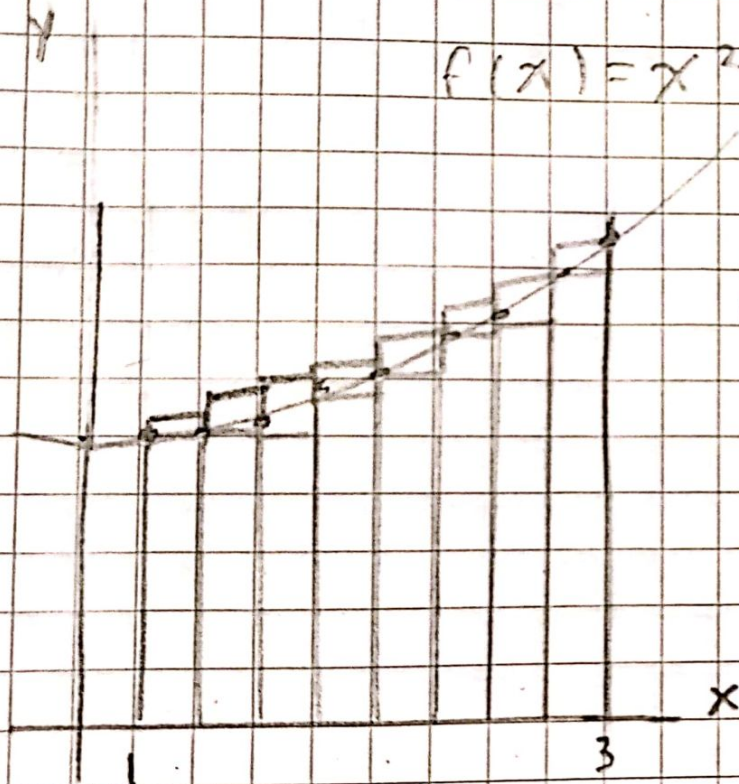
$$2.5^2 = 6.25 = 1.5625$$

$$2.75^2 = 7.5625 = 1.89$$

$$3^2 = 9 = 2.25$$

$$C_{DER} = 9.67 u^2$$

$$C_{IZQ} = 7.67 u^2$$



0.5
↓
 $CD = 10.75 u^2$
 $CI2 = 6.75 u^2$

0.25
↓
 $CD = 9.67 u^2$
 $CI2 = 7.67 u^2$