



$$A_1 = f(x_1) \Delta x = f(x_1) \Delta x$$

$$A_2 = f(x_2) \Delta x$$

$$\vdots$$

$$A_{12} = f(x_{12}) \Delta x$$

$$\text{Total Approx Area} = \sum_{i=1}^{12} f(x_i) \Delta x$$

$$= 43.60 \text{ mg sec/liter}$$

$$C.O. = \left(\frac{\text{Amount of dye (in mg)}}{\text{"Area" under curve in mg.s/liter}} \right) 60$$

$$C.O. = \left(\frac{\text{liters}}{\text{sec}} \right) 60$$

$$= (.112) 60$$

$$= 6.7 \text{ liters/min}$$

$$\text{"Area"} \approx \sum_{i=1}^n f(x_i) \Delta x$$

$$\text{Area} \equiv \lim_{n \rightarrow \infty} \sum_{i=1}^n f(x_i) \Delta x$$

$$= \int_a^b f(x) dx$$