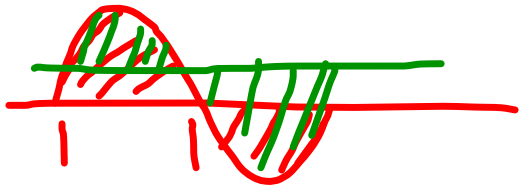
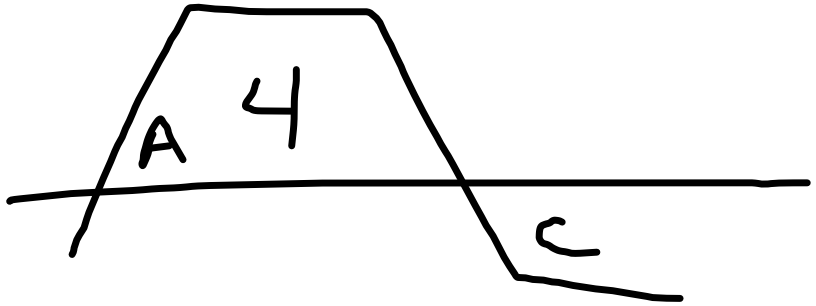


$\int$ area



$$A = \frac{1}{2}(1+3)\cdot 2$$

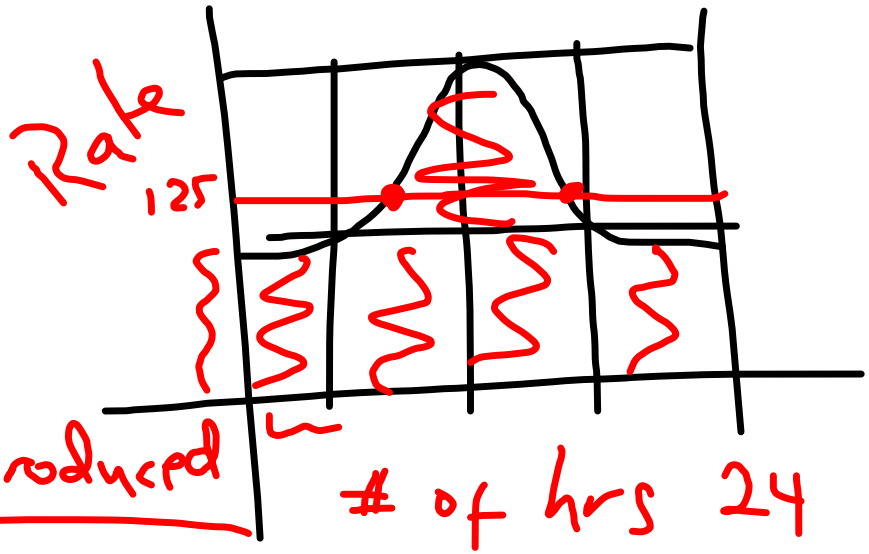
$$= 4$$

$$C = -\frac{1}{2}(1+2)\,1$$

$$= -\frac{3}{2}$$

$$A + C = 4 - \frac{3}{2}$$

$$= \frac{5}{2}$$



$$\frac{3000 \text{ produced}}{24}$$

125 barrels / hr

$$\int_2^8 f(x)\,dx = 10$$

$$\int_a^b f(x)+g(x)\,dx$$

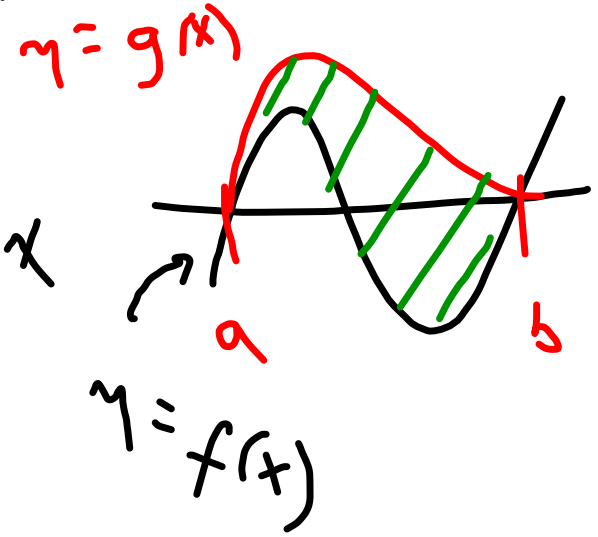
$$\int_2^8 6f(x)-3\,dx = \int_a^b f(x)\,dx + \int g(x)\,dx$$

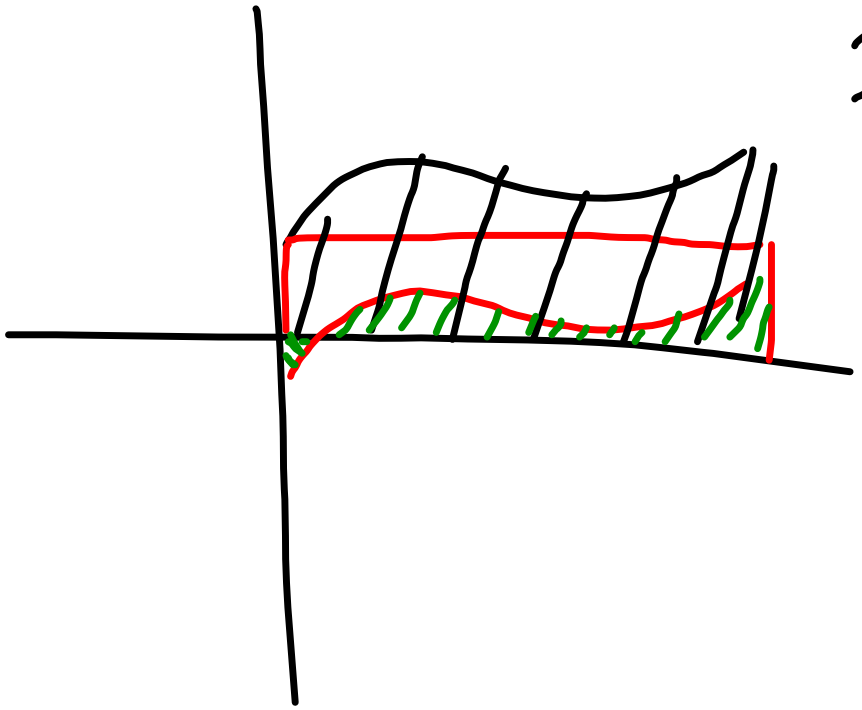
$$6\int_2^8 f(x)\,dx - \int_2^8 3\,dx$$

$$6(10) - 3x\Big|_2^8$$

$$60 - 18$$

$$42$$





Indefinite integral

$$\int \sec^2 x \, dx$$

$$\tan x + C$$

$$\int x^2 - 3x + 2 \, dx$$

$$\int x^2 \, dx - 3\int x \, dx + \int 2 \, dx$$

Thinking about

$$\frac{x^3}{3} + C_1 - 3 \cdot \frac{x^2}{2} + C_2 + 2x + C_3$$

$$\frac{x^3}{3} - \frac{3x^2}{2} + 2x + C$$

$$\frac{dy}{dx} = 2 \qquad \text{find } y = 2x + C$$

$$\int 2\,dx = 2x + C$$

$$\int \frac{d}{dx}(y)\,dx = \int 2\,dx$$

$$y = \int 2\,dx$$

$$\frac{d}{dx}\left[\int_{-5}^{x^3} \sin(4\pi t)\,dt\right]$$

$$(\sin 4\pi x^3)\cdot 3x^2$$

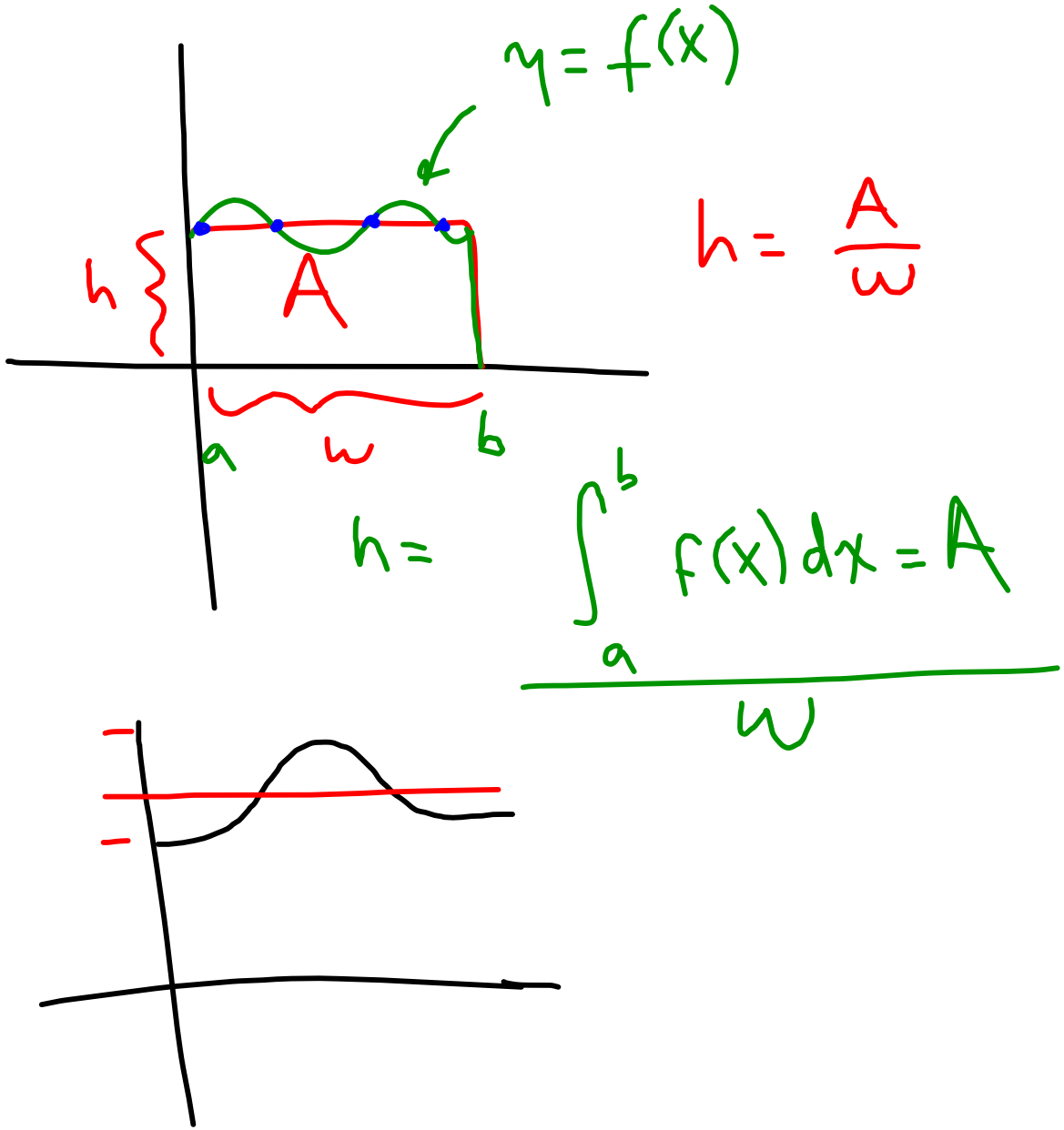
$$3x^2 \sin 4\pi x^3$$

$$\int_{-1}^{3} 3 + 4x \, dx$$

$$3x + 2x^2 \Big|_{-1}^{3}$$

$$27 - (-3 + 2)$$

$$28$$


y = f(x)
h
A
a
w
b
h = A/w
h = ∫_a^b f(x) dx = A
w