

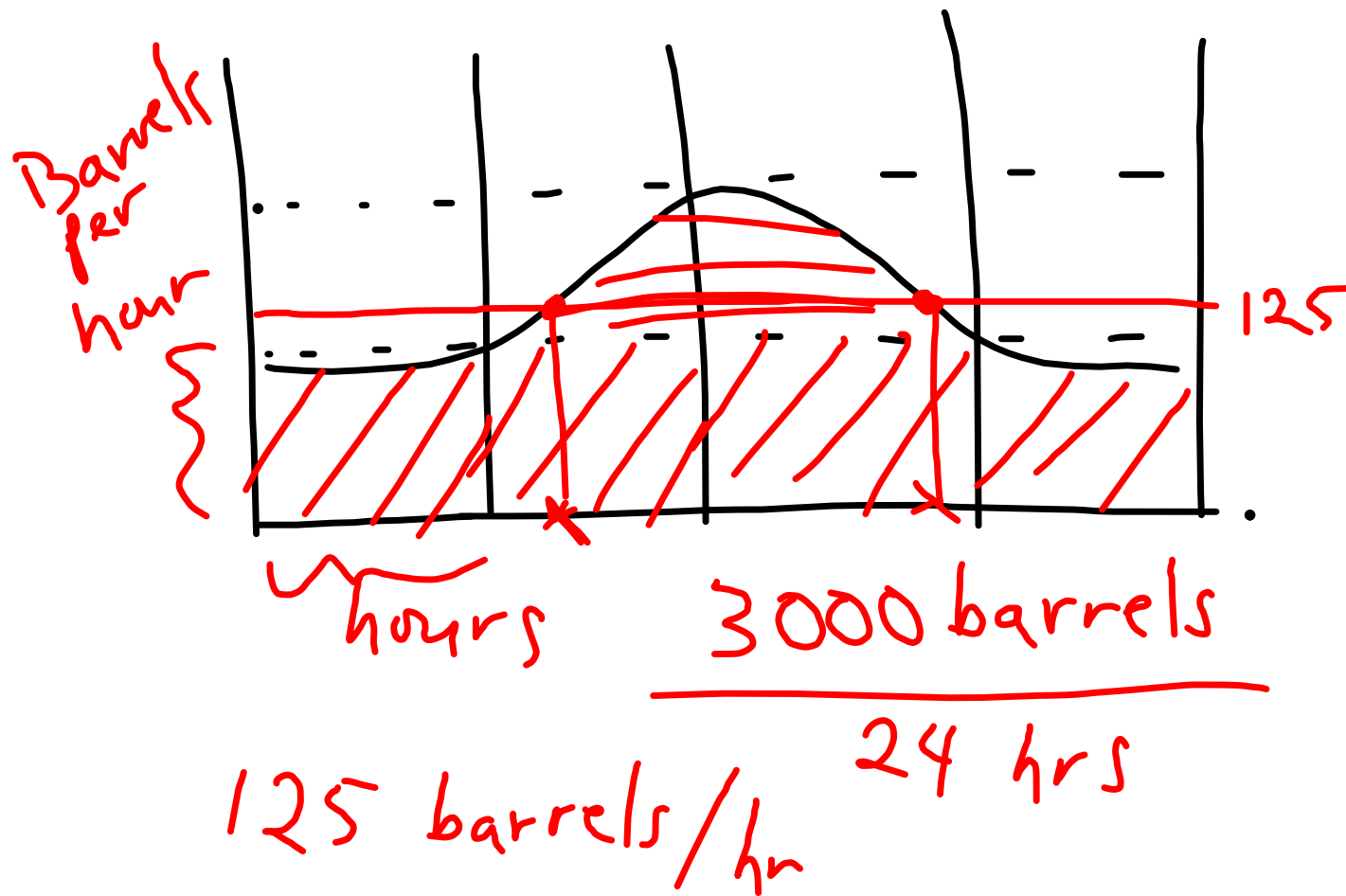
$$A = \frac{1}{2} (1+3) \cdot 2$$

$$= 4$$

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

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

$$A+C = \frac{5}{2}$$



$$\frac{dy}{dx} = 2x$$

$$\int 2x \, dx$$

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

$$x^2 + C$$

$$y = x^2 + C$$

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

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

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

$$60 - 18$$

$$42$$

$$\frac{dy}{dx} = -3x^2 + 5x - 1$$

$$\int -3x^2 + 5x - 1 \, dx$$

$$\int -3x^2 \, dx + \int 5x \, dx - \int 1 \, dx$$

$$-x^3 + \frac{5x^2}{2} - x + C$$

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

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

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

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

$$3x + 2x^2 \Big|_{-1}^3 = (9 + 18) - (-3 + 2) \\ = 28$$