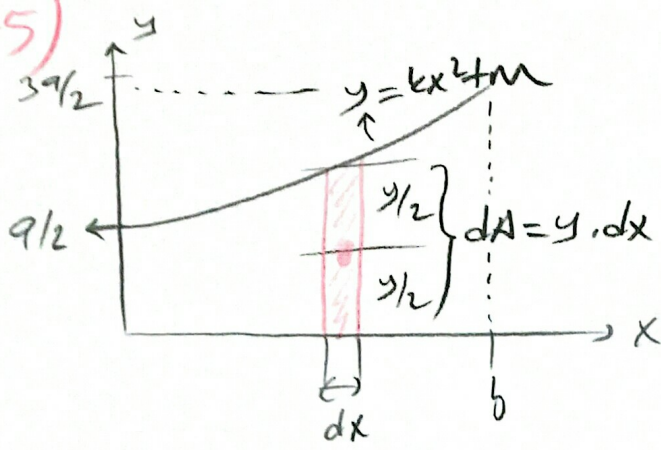
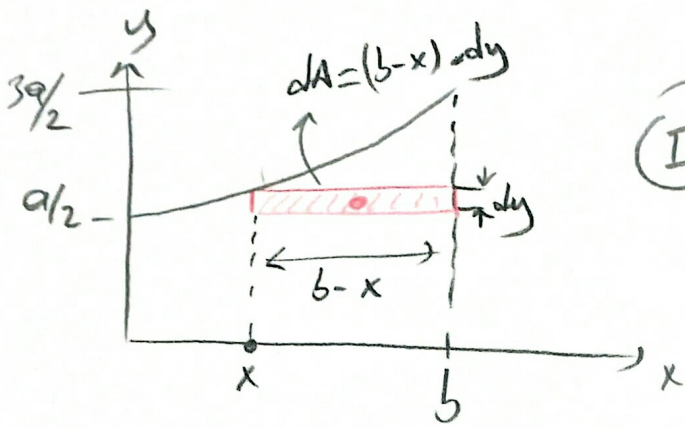


C-5)

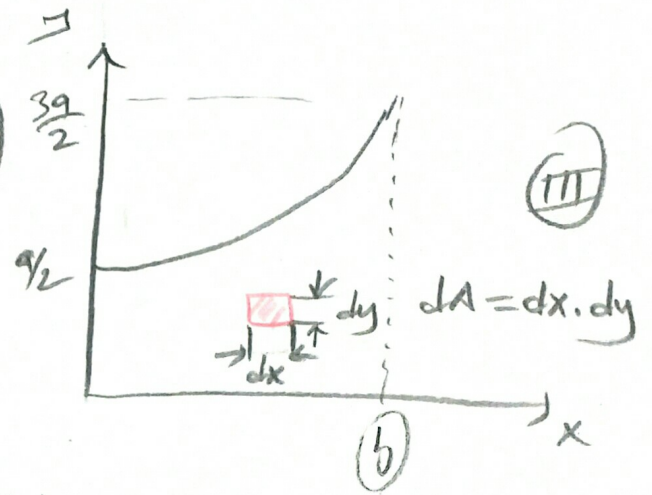


$x=0$ için $y = \frac{a}{2} \Rightarrow m = \frac{a}{2}$
 $x=b$ için $y = \frac{3a}{2} \Rightarrow k = \frac{a}{b^2}$

$$y = \frac{a}{b^2} x^2 + \frac{a}{2}$$



(II)



(III)

(I) (II) ve (III) ile verilen yaklaşımlardan herhangi birini kullanılabilir. Burada (I) kullanılmıştır.

$$\bar{x} = \frac{\int x dA}{\int dA} = \frac{\int x y dx}{\int y dx} = \frac{\int_0^b x \cdot \left(\frac{a}{b^2} x^2 + \frac{a}{2}\right) dx}{\int_0^b \left(\frac{a}{b^2} x^2 + \frac{a}{2}\right) dx}$$

$$= \frac{\frac{1}{2} a b^2}{\frac{5}{6} a b} = \frac{3}{5} b$$

$$\bar{y} = \frac{\int \frac{y}{2} \cdot y dy}{\frac{5}{6} a b} = \frac{1}{10 a b} \int_0^b \left(\frac{a^2 x^4}{b^4} + \frac{a^2 x^2}{b^2} + \frac{a^2}{4}\right) dx$$

$$= \frac{47}{100} a$$