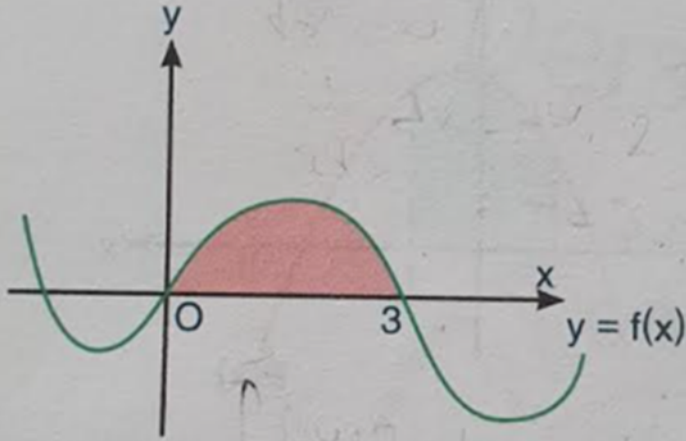


$$5. \int_0^9 f(\sqrt{x}) dx = 12$$

$$\int_{-3}^0 x \cdot f(x+3) dx = 3 \quad \text{eşitlikleri veriliyor.}$$



Yukarıda verilen  $y = f(x)$  grafiğine göre boyalı bölgenin alanı kaç  $br^2$ 'dir?

- A) 1      B) 2      C) 3      D) 4      E)

$$\sqrt{x} = u \Rightarrow \frac{1}{2\sqrt{x}} \cdot dx = du \Rightarrow dx = \underbrace{2\sqrt{x}}_4 \cdot du$$

$$dx = 2u \cdot du$$

$$\int_0^3 f(u) \cdot 2u \cdot du = 12$$

$$\int_0^3 f(u) \cdot u \cdot du = 6 \Rightarrow \left. \begin{array}{l} u=t \\ du=dt \end{array} \right\} \Rightarrow \int_0^3 f(t) \cdot t \cdot dt = 6$$

$$x+3=t \Rightarrow dx=dt$$

$$\int_0^3 (t-3) \cdot f(t) \cdot dt = 3 \Rightarrow \underbrace{\int_0^3 t \cdot f(t) \cdot dt}_6 - 3 \int_0^3 f(t) \cdot dt = 3$$

$$-3 \cdot \int_0^3 f(t) \cdot dt = -3$$

$$\int_0^3 f(t) \cdot dt = 1 //$$