Alıştırmalar

1) $\int (1-2x^2+3x^3)dx = ?$, $\int \left(\frac{6}{x^2}+2x^{3/2}-1\right)dx = ?$, $\int \left(\sqrt[3]{x^2}+\frac{4}{\sqrt[4]{x^3}}\right)dx = ?$

$\int (x+1)^4 dx = ?$, $\int \frac{dx}{(x-5)^{10}} = ?$, $\int (e^x + x^2)dx = ?$

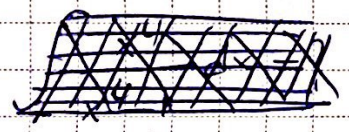
2) $\int x e^{x^2} dx = ?$, $\int x^2(1-x^3)^5 dx = ?$, $\int \sin^4 x \cos x \, dx = ?$

$\int \frac{dx}{(1+2x)^2} = ?$, $\int \frac{(1+\sqrt{x})^4}{\sqrt{x}} dx$, $\int \frac{dx}{x \ln x} = ?$

3) $\int e^x \sin x = ?$, $\int x^3 \ln x dx = ?$, $\int x e^x dx = ?$, $\int x^2 \cos x dx = ?$

$\int x^2 (\ln x)^2 dx = ?$, $\int x^3 e^{-x} dx = ?$

4) $\int \frac{x^3}{2x-1} dx = ?$, $\int \frac{dx}{x^2+x-6} = ?$, $\int \frac{x+2}{x^2+x} dx = ?$

 , $\int \frac{x^2}{(x+2)^3} dx = ?$, $\int \frac{x^2 dx}{(x-1)(x^2+2x+1)} = ?$

$\int \frac{x^2+1}{x^3+2x^2+x} dx = ?$

5) $\int_0^1 x dx = ?$, $\int_0^1 e^x dx = ?$, $\int_0^{\pi} \sin x dx = ?$, $\int_4^9 \frac{1-\sqrt{x}}{\sqrt{x}} dx = ?$

$\int_1^e \frac{\sin(\ln x)}{x} dx = ?$, $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} (8x^2 + \sin x)dx = ?$

6) Aşağıda denklemleri verilen eğri ve doğrular tarafından sınırlanan kapalı bölgelerin alanlarını bulunuz.

a) $y = x^2+2x$, $x=-1$, $x=1$, $y=0$

b) $y = x^3$, $y = 2x - x^2$

c) $y = x^3$, $y = x$

d) $x = y^2$, $y = x - 2$

e) $y = x^2 + 4$, $y = x - 2$, $x = -3$, $x = 0$

f) $y = 4x - x^2$, $x = 1$, $x = 2$, $y = 0$

g) $y = x^2$, $y = x^3$, $x = -2$, $x = -1$