

SET-4 CEVAPLAR

1) integraller:

a) $x - \ln|1+e^x| + C$

c) $\frac{1}{6} (\ln|x^2-x+1| + 6x - \frac{2}{3} \ln|x+1| - 2\sqrt{3} \tan^{-1}(\frac{2x-1}{\sqrt{3}})) + C$

d) $\frac{\sec^3 x - \sec x}{3} + C$

e) π

f) $\frac{1}{2} \ln|x^2+2| + 2 \arctan(\frac{x}{\sqrt{2}}) + C$

g) $\arcsin(\frac{x+1}{\sqrt{3}}) + C$

h) $\frac{(\ln x)^3}{51} + C$

i) Kısmi integrasyon (~~$\sec x = u$~~ / $\sec^2 x dx = du$ ~~\rightarrow~~)

j) $\frac{2e^{2x}}{13} (\cos 3x - \frac{3}{2} \sin 3x)$

k) $\frac{1}{4} \int_{17}^{626} \sqrt{u}(u-1) du$

l) $\frac{2x^2+1}{8\sqrt{4x^2+1}} \Big|_0^{\frac{3\sqrt{2}}{2}}$

m) $\ln|1+\sin\theta| + C$

n) $\frac{1}{4} (4x + \ln|1-x| - \ln|x+1| - 2 \arctan x)$

o) $\frac{1}{16} (8x + \sin 8x) + C$ (\leftarrow veya sınırlar yalıtılır)

p) $\frac{1}{12} (9 \sin \theta + \sin 3\theta) + C$

q) $\frac{2x^2+1}{8\sqrt{4x^2+1}} + C$

~~h) $\frac{1}{4}$~~

b) $6 \arcsin(\frac{x-2}{2}) - 8 \frac{\sqrt{4-(x-2)^2}}{2} + 2 \cdot \frac{x-2}{2} \frac{\sqrt{4-(x-2)^2}}{2} + C$