339/ (3) ORDEZKAPEN METODOA

$$\int \sqrt{x-4}\,(x+5)\,dx =$$

$t = \sqrt{x-4}$
$t^2 = x-4$
$2t\,dt = dx$
$x = t^2+4$

$$\int t\left[(t^2+4)+5\right] 2t\,dt =$$

$$\int t(t^2+9)\,2t\,dt = \int (2t^4 + 18t^2)\,dt$$

$$= \frac{2t^5}{5} + \frac{18t^3}{3} + k = \frac{2\sqrt{(x-4)^5}}{5} + 6\sqrt{(x-4)^3} + k$$

(4) $$\int \frac{\sqrt[3]{x-1} + x - 1}{\sqrt{(x-1)^3}}\,dx$$

Berro deserdiu: t-ren bereBailea bi erzen arteko mkt-a.

$mkt(2,3) = 6$

$t^6 = x-1 \rightarrow \boxed{x = t^6+1}$

$6t^5\,dt = dx \quad t = \sqrt[6]{x-1}$

$$= \int \frac{\sqrt[3]{t^6} + (t^6+1) - 1}{\sqrt{(t^6)^3}}\,6t^5\,dt$$

$$\int \frac{(t^2+t^6)}{t^9}\,6t^5\,dt = \int \frac{6t^7}{t^9} + \frac{6t^{11}}{t^9}\,dt = 6\int (t^{-2} + t^2)\,dt =$$

$$= 6\left(\frac{t^{-1}}{-1} + \frac{t^3}{3}\right) + k = 6\left[\frac{-1}{\sqrt[6]{x-1}} + \frac{\sqrt[6]{(x-1)^3}}{3}\right] + k$$

$$= \boxed{\frac{-6}{\sqrt[6]{x-1}} + \frac{\sqrt{x-1}}{3} + k}$$