icio 5.5

418-419

5) $\int \frac{x^3}{x^4-5}\,dx$ $\quad u = x^4-5$

$du = 4x^3\,dx$

$\sqrt[4]{u+5} = x$

$dx = \frac{du}{4x^3}$

$\int \frac{x^3}{u}\,dx$ $\qquad \int \frac{x^3}{(u)} \cdot \frac{1}{4}\,du$

$\frac{1}{4}\int \frac{1}{u}\,du$

$\frac{1}{4}\left[\ln(x^4-5)\right]+C$ //

15. $\int \cos^3\theta \operatorname{sen}\theta$ $\qquad \int u^3 \operatorname{sen}\,du$

$u = \cos\theta$ $\quad \frac{u^4}{4}$

$du = \operatorname{sen}\theta$ $\qquad \int u^3 \operatorname{sen}\theta\,du$ $\quad \frac{1}{4}(\cos\theta)^4 + C$ //

25. $\int e^x\sqrt{1+e^x}\,dx$ $\qquad \int e^x\sqrt{u}\,du$

$u = 1+e^x$ $\quad u^{\frac{3}{2}}$

$du = e^x$ $\quad \frac{3}{2}$

$\frac{2u^{\frac{3}{2}}}{3}+C$ $\qquad \frac{2(1+e^x)^{\frac{3}{2}}}{3}+C$ //