$$\int Cus(\ln(\kappa))d\kappa \implies \int Cus(u)e^{\nu}du$$

$$U = \ln(x) = \int e^{u} \cos(u) du$$

$$\int \int e^{x} - 1 dx$$

$$\int \frac{e^{x}}{e^{x}} \sqrt{e^{x} - 1} \, dx$$

$$\int \frac{\sqrt{e^x - 1}}{e^x} de^x \qquad v = e^x$$

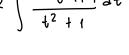
$$\int \frac{\sqrt{U-1}}{U} dv \qquad \qquad t^2 = U-1 \implies t^2 + 1 = 0$$

$$2tdt = dv$$

$$2 \int \frac{t^2+1-1}{t^2+1} dt$$

$$\int \frac{t^2+1}{t^2+1} dt$$

$$\frac{1}{1}\int \frac{t^{1-1}}{t^2+t} dt$$



$$2\int_{t^2+1}^{t^2+1} dt = 2\left[t - \operatorname{arclem}(t)\right] + C$$

3. 
$$\int x \operatorname{carctan} \left( \sqrt{x^2 - 1} \right) dx$$

$$\frac{1}{2} \int \operatorname{carctan} \left( \sqrt{x^2 - 1} \right) d[x^2 - 1]$$

1/2 arctan ( Jx2-1 ) d[x2-1]

$$\frac{1}{2} \int \operatorname{arcton} \left( \int U \right) dU \qquad \text{Obs} : \left( \operatorname{arcton} \left( \int U \right) \right)^{1} = \frac{1}{2 \int U \left( U + 1 \right)}$$

 $\frac{1}{z}$  [ v arctan (Jv) -  $\int v \cdot \frac{1}{2Jv'(v+1)} dv$ ]  $\frac{1}{2}$  [ varetan ( $\sqrt{\sqrt{2}}$ ) -  $\frac{1}{2}$ ]  $\frac{\sqrt{2}}{\sqrt{2}}$   $\frac{1}{2}$ 

$$\frac{1}{2} \left( U \cdot \operatorname{arctin} \left( JU \right) - \frac{1}{2} \cdot 2 \left( JU - \operatorname{arctin} \left( JU \right) \right) \right) + C$$

$$\frac{1}{2} \left( U \cdot \operatorname{arctin} \left( JU \right) - \frac{1}{2} \cdot 2 \left( JU - \operatorname{arctin} \left( JU \right) \right) \right) + C$$

1 ( U. arctum (JJ) - JJ + arctan (JU))+ C

$$\left( (x^2-1) \operatorname{corctun} \left( \int x^2-1 \right) - \int x^2 \right)$$

 $\int \frac{\mathrm{d}\ln|x|}{1 - \ln|x|} = -\ln|1 - \ln|x|| + C$ 

1 [ (x2-1)arctum (Jx2-1) - Jx2-1 + arctan (Jx2-1)]+ c

4. \ (x - x ln (x1) \frac{1}{2} dx

$$\int \frac{1}{x - x \ln |x|} dx - \int \frac{1}{x} \frac{1}{(1 - \ln |x|)} dx$$

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2 ( UH-1 dJU

\\ \frac{17}{17} \cdot \frac{17}{17} \cdot \dots

$$2\int_{0}^{1} - \frac{1}{v+1} dv$$