[178] [in pencil down left-hand side] 25th Augst
1843

$u = R + X$
$P = \frac{dR}{dx} + \frac{dX}{dx}$
$\frac{dX}{dx} = P - \frac{dR}{dx}$
$X = \int \left(P - \frac{dR}{dx}\right) dx$
$P = -\frac{y^2}{x^2\sqrt{x^2+y^2}}$
$R = \frac{\sqrt{x^2+y^2}}{x}$

$\frac{1}{\varepsilon^x+1}$
$\frac{-\varepsilon^x}{(\varepsilon^x+1)^2}$
$\frac{-\cancel{(\varepsilon^x+1)^2}\cdot\varepsilon^x+\varepsilon^{2x}\,2\cancel{(\varepsilon^x+1)}}{(\varepsilon^x+1)^3}$
$\frac{\varepsilon^{2x}-\varepsilon^x}{(\varepsilon^x+1)^3}$