

$$\int \frac{3}{4-2z^2} + \int \frac{z}{2-z^2} = \int \frac{du}{u}$$

$$\frac{3}{2\sqrt{2}} \frac{z}{\sqrt{2}} - \frac{1}{2} \ln|2-z^2| = \ln|u| + c$$

$$\frac{3}{2\sqrt{2}} \frac{\frac{u}{v}}{\sqrt{2}} - \frac{1}{2} \ln|2-\frac{u^2}{v^2}| = \ln|u| + c$$

$$\frac{3}{2\sqrt{2}} \frac{x-1}{\sqrt{2(y-2)}} - \ln|2-\frac{(x-1)^2}{(y+2)^2}| = \ln|x-1| + c$$

وهنالك طريقة ثانية او هي قد رتب خطوات حل المعادلات

Reduce to Homogeneous من النوع

(ODE with constant coefficient) has the form

$$\dots \cdot \frac{dy}{dx} = \frac{a_1x+b_1y+c_1}{a_2x+b_2y+c_2}$$

Case 1: If to lines

$$a_1x + b_1y + c \quad \text{are intersect } i \cdot e \left(\frac{a_1}{b_1} \neq \frac{a_2}{b_2} \right)$$

$$a_2x + b_2y + c$$

1) find the point of intersection

$$2) x = r + a \rightarrow dx = dr$$

$$y = s + b \rightarrow dy = ds$$

3) sub · in ode (1) to get homogeneous in $\frac{ds}{dr}$

$$a) \frac{ds}{dr} =$$

$$b) \text{ let } s = vr \rightarrow \frac{ds}{dr} = F(V)$$

$$C) \frac{dr}{r} + \frac{dv}{r-f(v)} = 0$$