$y_1(x)=x$ עבור $y' = 1+x^2-2xy+y^2$ 5

$y' = q_1(x) + q_2(x)y + q_3(x)y^2$

$v = \left[c + \int Q(x) e^{\int P(x)dx} dx\right] e^{-\int P(x)dx}$

$y = y_1 + \frac{1}{v}$: כאשר $y_1(x)$ הוא פתרון פרטי של המשוואה

$\begin{cases} P(x) = q_2 + 2q_3 y_1 \\ Q(x) = -q_3 \end{cases}$

$$y' = 1 + x^2 - 2xy + y^2 \quad , \quad y_{1(x)} = x$$

$$\begin{cases} q_{1(x)} = 1 + x^2 \\ q_{2(x)} = -2x \\ q_{3(x)} = 1 \end{cases} \Rightarrow \begin{cases} P_{(x)} = q_2 + 2q_3 y_1 = -2x + 2 \cdot 1 \cdot x = 0 \\ Q_{(x)} = -q_3 = -1 \end{cases}$$

$$v = \left[C + \int Q_{(x)} \cdot e^{\int P_{(x)} \cdot dx} \, dx\right] e^{-\int P_{(x)} \cdot dx}$$

$$v = \left[C - \int e^{\int 0 \cdot dx} \, dx\right] e^{-\int 0 \cdot dx}$$

$$v = \left[C - \int e^{C} \, dx\right] e^{-C}$$

$$v = [C - e^C x] e^{-C}$$

$$v = C - x$$

$$y = y_1 + \frac{1}{v}$$

$$y = x + \frac{1}{C - x}$$