$x\,dy = (y + (xy)^\beta)\,dx$

$x\,dy = (y + (xy)^\beta)\,dx \quad /: dx$

$(y + (xy)^\beta)dx - x\,dy = 0$

$\underbrace{}_{P(x,y)} \quad \underbrace{}_{Q(x,y)}$

$P(tx, ty) = ty + (tx\,ty)^\beta \qquad Q(tx, ty) = \boxed{tx}$

$P(tx, ty) = ty + (t^2\,xy)^\beta \qquad \Rightarrow$ Stupanj hom $= \textcircled{1}$

$\qquad = t\,(y + (xy)^{1/2})$

$\qquad \Rightarrow \beta = \dfrac{1}{2} \Rightarrow (ty + \boxed{\sqrt{t^2}}\,(xy)^{1/2})$

$xy' = y + \sqrt{xy} \quad /: x$

$y' = \dfrac{y}{x} + \sqrt{\dfrac{y}{x}}$

$z'x + z = z + \sqrt{z}$

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$y = z \cdot x \quad /'$
$y' = z' \cdot x + z$

$\dfrac{dz}{dx} \cdot x = \sqrt{z} \quad /. \dfrac{dx}{x\,\sqrt{z}}$

$\sqrt{z} = 0 \rightarrow z = 0 \rightarrow \boxed{y = 0}$ dod. rj:

$\displaystyle\int \dfrac{dz}{\sqrt{z}} = \int \dfrac{dx}{x} \quad \rightarrow \quad 2\sqrt{z} = \ln|x| + c \; /: 2$

$\sqrt{\dfrac{y}{x}} = \dfrac{1}{2}\ln|x| + c \quad /^2 \;$ opće rješenje

$T(1,1) \Rightarrow 1 = 0 + c \rightarrow \underline{c = 1}$

Konačno rj: $\; y = x\left(\dfrac{1}{2}\ln|x| + 1\right)^2$

*nap. rj. $y = 0$ ne prolazi kroz T

b) $xy' = y + x^\beta\,y^\beta \quad /: x$

$y' = \dfrac{y}{x} + x^{\beta-1} \cdot y^{\beta-1}$

$\beta \in \mathbb{R} \setminus \{0, 1\}$