

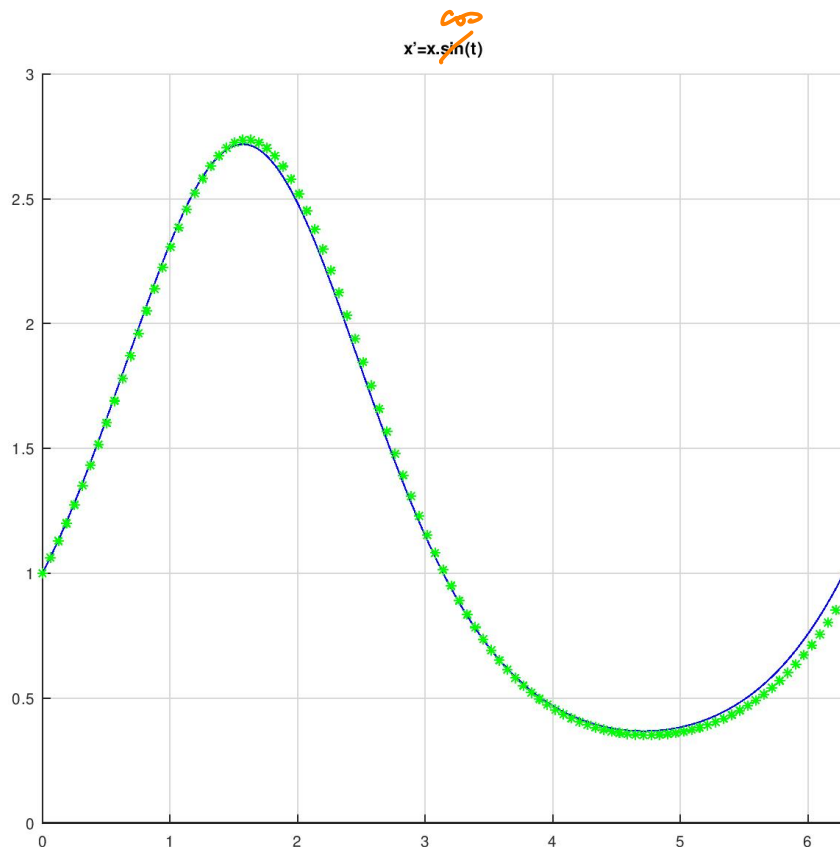
$$\textcircled{1} \quad x' = x \cdot \cos t$$

$$x(0) = 1$$



$$x(t) = \exp(\sin t)$$

$$t \in \mathbb{R}$$



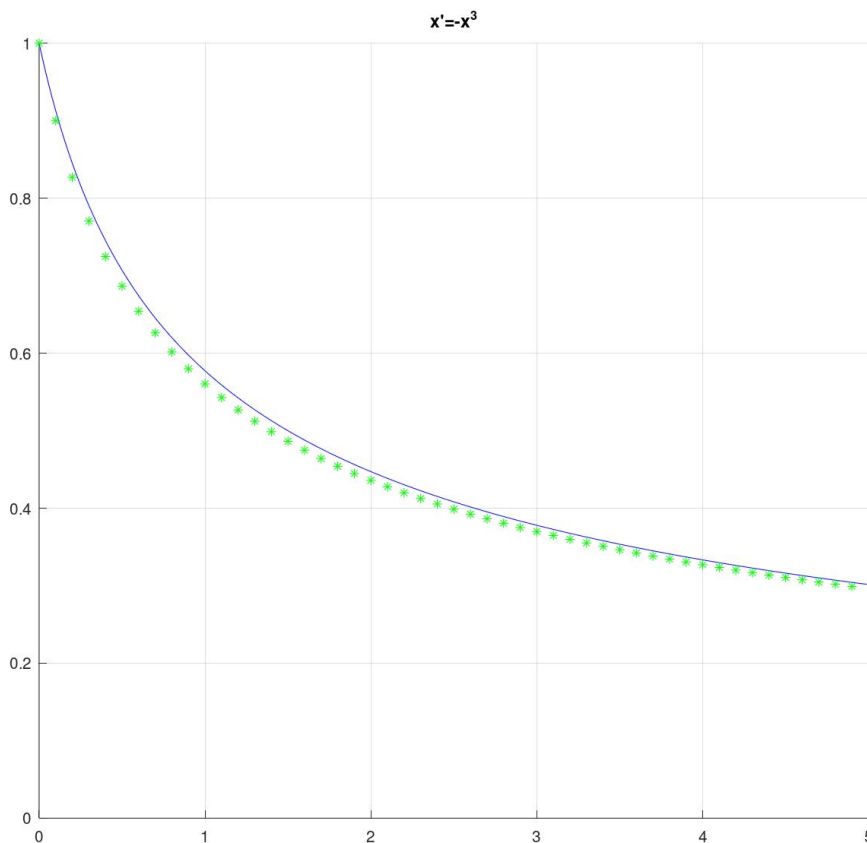
$$\textcircled{2} \quad x' = -x^3$$

$$x(0) = 1$$



$$x(t) = \frac{1}{\sqrt{1+2t}}$$

$$t \in [0, +\infty)$$



3

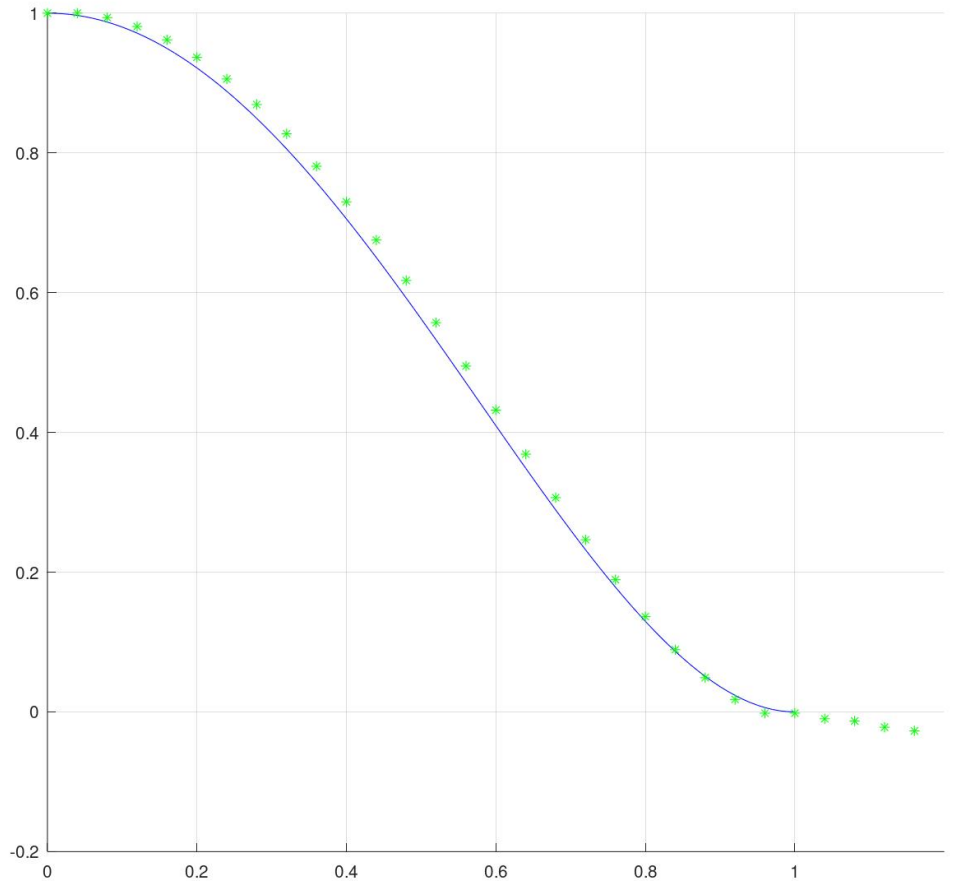
$$x' = -4t\sqrt{x}$$

$$x(0) = 1$$



$$x(t) = (1-t^2)^2$$

$$t \in [0, 1]$$



4

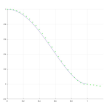
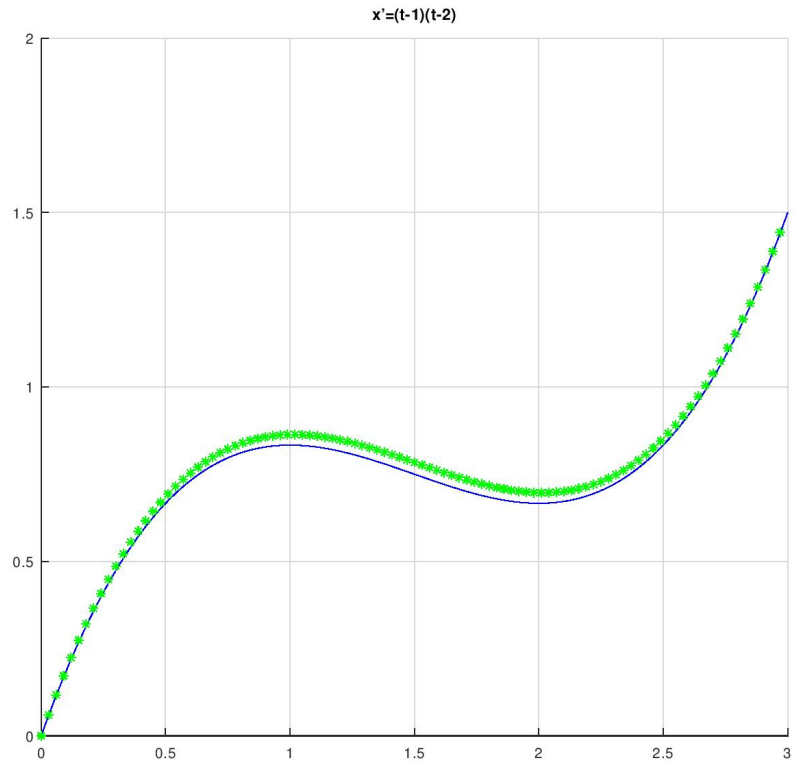
$$x' = (t-1)(t-2)$$

$$x(0) = 0$$



$$x(t) = \frac{t^3}{3} - \frac{3t^2}{2} + 2t$$

$$t \in \mathbb{R}$$



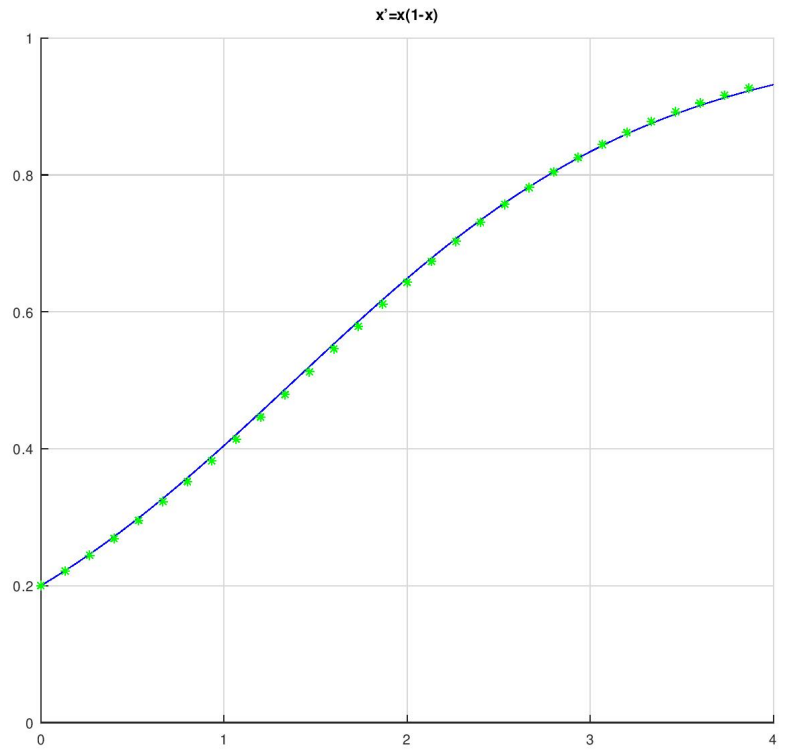
5

$$x' = x(1-x)$$

$$x(0) = x_0 \in (0,1)$$

$$x(t) = \frac{x_0}{1 + x_0(e^t - 1)}$$

$$t \in \mathbb{R}$$



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$$x' = -\frac{t}{x}$$

$$x(0) = 1$$

$$x(t) = \sqrt{1-t^2}$$

$$t \in (-1,1)$$

