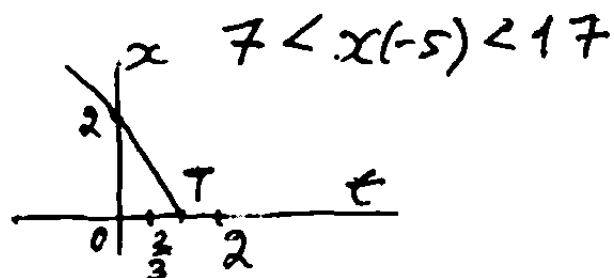


1 דוגמה

$$\dot{x} = -2 + \cos x \cdot \sin t \quad |1|, 1$$

$$\frac{x(0)=2 \quad x(T)=0}{\frac{2}{3} < T < 2, \quad 0 < x(\frac{2}{3}) < \frac{4}{3},}$$

הוכחה:



$$x(0)=0, \quad \dot{x} = \left(\sqrt{|x|+1} + \frac{1}{\sqrt{|x|+1}} \right) \quad |1|, 2$$

$$x(-1) < -2, \quad x(5) > 10 \quad \text{הוכחה}$$

$$x(0)=1 \quad \dot{x} = (\cos 3x - \sin x) x \quad |1|, 3$$

$$e^{-2} < x(1) < e^2 \quad \text{הוכחה}$$

$$e^{-2} < x(-1) < e^2$$

$$y(0)=-1, \quad y' \cos x + y \sin x + \sin |y|^{\frac{1}{2}} \sin x - 2 \sin x = 0 \quad 4$$

$$0 < x < \frac{\pi}{2}, \quad 1-2 \cos x < y < 3-4 \cos x \quad \text{הוכחה}$$