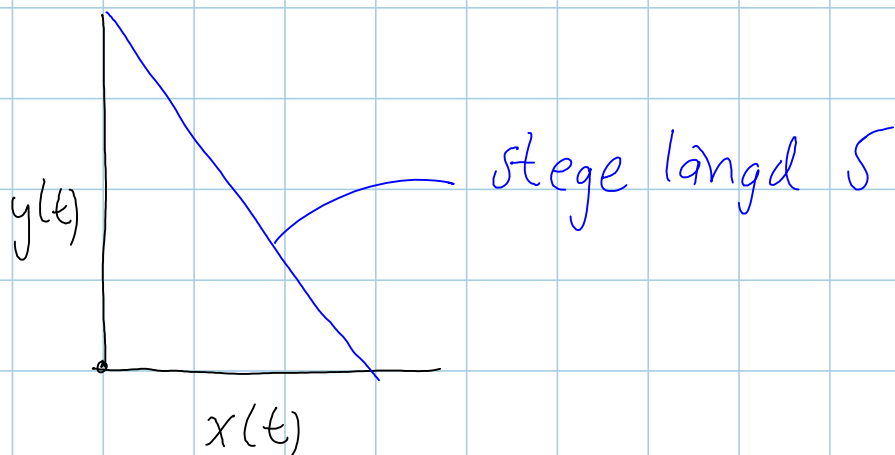


2043

den 30 mars 2011
18:40



Pyth sats ger

$$x(t)^2 + y(t)^2 = 5^2$$

\Rightarrow (derivera m.a.p t)

$$2x(t)x'(t) + 2y(t)y'(t) = 0$$

\Leftrightarrow

$$x(t)x'(t) + y(t) \cdot y'(t) = 0$$

Vid $t=t_0$ gäller

$$x'(t_0) = 0,2, \quad y(t_0) = 3$$

Insättning ger

$$\underline{x(t_0)} \cdot 0,2 + 3 \cdot y'(t_0) = 0$$

Vad blir detta?

$$\text{Ja} \quad x(t_0)^2 + 3^2 = 5^2 \Rightarrow x(t_0) = 4 \quad \text{sa}^{\circ}$$

$$4 \cdot 0,2 + 3 \cdot y'(t_0) = 0 \Leftrightarrow y'(t_0) = -\frac{0,8}{3}$$
$$= -\frac{4}{15}$$

Svar: $-\frac{4}{15} \text{ m/s}$ ($\approx -0,3 \text{ m/s}$)