Can Solutions have a Local Maximum?

Quiz: Can Solutions have a Local Maximum?.
Can solutions of autonomous equations have a strict local maximum? (For a function $f(t)$ a strict local maximum at time $t = a$ means $f(a)$ is larger than any nearby values of $f(t)$. Graphically, it is at the top of a hill.)

Think about your answer and then look at the choices.

18.03SC Differential Equations
Fall 2011