Name_____ **CM#_____**

Day 34--Concept Question

Consider the following differential equation for the draining of a tank:

$$\frac{dh}{dt} = -k\sqrt{h}$$

with the initial condition:

$$h(0) = 10$$

Which of the following equations is the correct way to apply explicit Euler to this equation?

a) $h_{n+1} = h_n - \left(k\sqrt{h_n}\right)t$

b) $h_{n+1} = h_n - \left(k\sqrt{h_n}\right)\Delta t$

c) $h_{n+1} = h_n - \left(k\sqrt{h}\right)\Delta t$

d) $h_{n+1} = h_n - \left(k\sqrt{h}\right)t$

e) $h_{n+1} = \left(k\sqrt{h_n}\right)\Delta t$

f) $h_{n+1} = \left(k\sqrt{h}\right)t$

g) None of the above. (Explain.)