

Chapter 7, Problem 37.

A circuit is described by

$$4 \frac{dv}{dt} + v = 10.$$

- (a) What is the time constant of the circuit?
- (b) What is $v(\infty)$, the final value of v ?
- (c) If $v(0) = 2$, find $v(t)$ for $t \geq 0$