

Figure P2.11

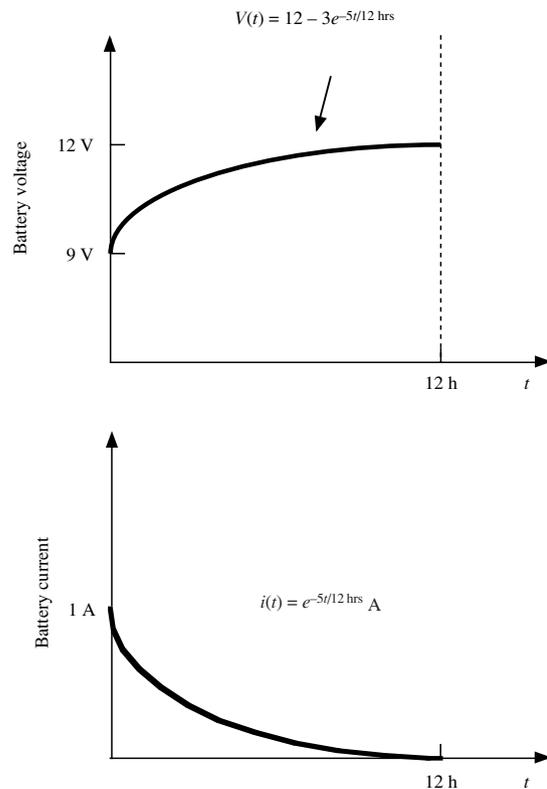


Figure P2.12

2.12 The charging scheme used in Figure P2.12 is called a *tapered-current charge cycle*. The current starts at the highest level and then decreases with time for the entire charge cycle, as shown. The battery is charged for 12 h. Find:

- The total charge delivered to the battery.
- The energy transferred to the battery during the charging cycle.

Hint: Recall that the energy, w , is the integral of power, or $P = dw/dt$.

Sections 2.2, 2.3: KCL, KVL

2.13 Use Kirchhoff's current law to determine the unknown currents in the circuit of Figure P2.13. Assume that $I_0 = -2$ A, $I_1 = -4$ A, $I_S = 8$ A, and $V_S = 12$ V.

2.14 Apply KCL to find the current i in the circuit of Figure P2.14.

2.15 Apply KCL to find the current I in the circuit of Figure P2.15.

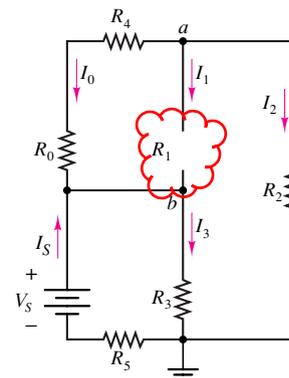


Figure P2.13

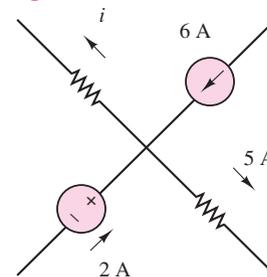


Figure P2.14