

Fig. 3.6 Discharge of a capacitor.

judging simply by eye. Notice that  $t = RC$  entails  $\alpha t = 1$  and  $U/U_0 = e^{-1} = 1/e$ . It follows that for  $t = RC$  one has  $U = 100/e \approx 36.79$ . Directly from the graph one estimates that  $U = 36.79$  corresponds to  $t = 3.2$  s. Hence  $RC = 3.2$ ; in view of  $R = 10^6 \Omega$ , this entails  $C = 3.2 \times 10^{-6} \text{ F}$ , or in other words  $C = 3.2 \mu\text{F}$ .

Note in passing that  $RC = 3.2$  yields  $\alpha = 1/RC = 0.3125$ .

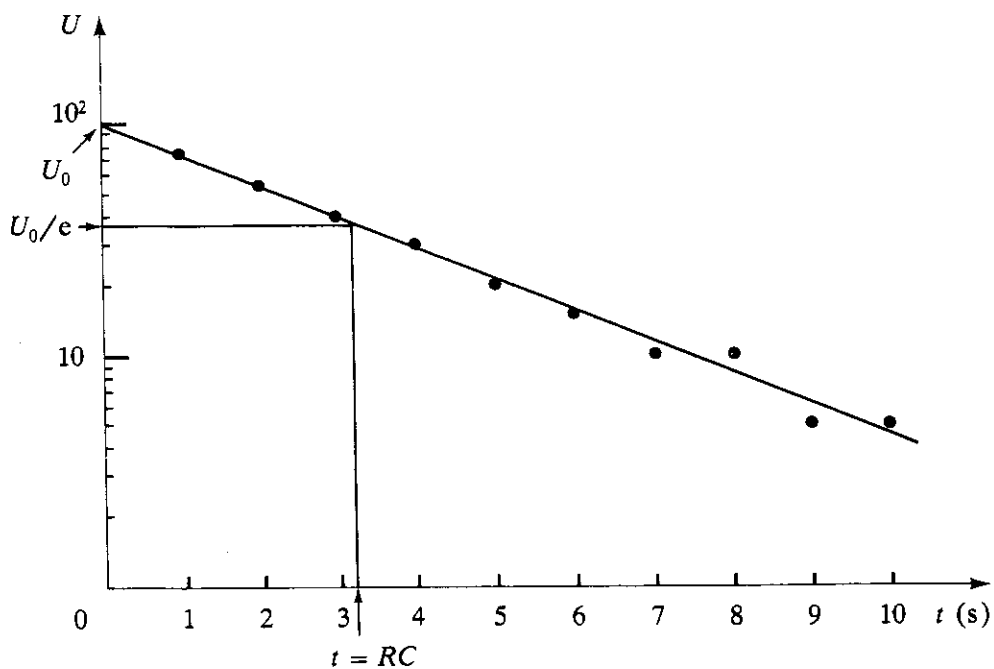


Fig. 3.7 Using a semi-logarithmic scale.