

7(a)	$V_C = V_R$
7(b)(i)	$C = Q / V$
	$= (7.2 \times 10^{-3}) / 12 \text{ (= } 6.0 \times 10^{-4} \text{ F)}$
	$= 600 \mu\text{F}$
7(b)(ii)	$R = V / I$
	$= 12 / (1.5 \times 10^{-3}) \text{ (= } 8000 \Omega)$
	$= 8.0 \text{ k}\Omega$
7(b)(iii)	$\tau = RC$
	$= 8000 \times 6.0 \times 10^{-4}$
	$= 4.8 \text{ s}$
7(c)	<i>Any two points from:</i> • charge and current are both (directly) proportional to voltage • charge is (directly) proportional to current • current is the rate of change of charge
	Q is proportional to the rate of change of Q (so exponential variation)