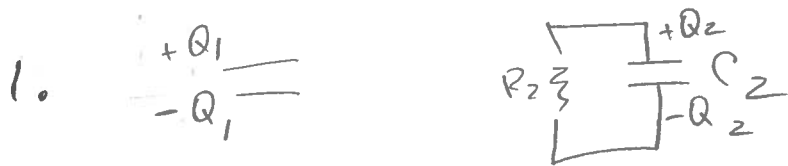


# Answers Test 2 2016



$$i = \frac{V}{R_1 + R_2 + R_3}$$

$$Q_2 = C_2 R_2 i = C_2 V \frac{R_2}{R_1 + R_2 + R_3}$$

$$Q_1 = C_1 (V - i R_1)$$

$$i = 1 \text{ A} ; Q_2 = 4 \cdot 10^{-6} \text{ C} ; Q_1 = 8 \cdot 10^{-6} \text{ C}$$

2.  $\frac{R_1}{R_3} = 2$

3. 1)  $V(2A) - V(0) = -\frac{Q_0 A^2}{3 \epsilon_0}$

2)  $V(2A) - V(0) = -\frac{13}{20} \frac{Q_0 A^4}{\epsilon_0 D^2}$

4.  $i = \frac{V a}{\frac{Q_0 L_1}{a} + Q_0 L_3}$

$$Q = \epsilon_0 Q_0 i = \frac{\epsilon_0 V a}{\frac{L_1}{a} + L_3}$$