

Set $I_q \rightarrow 0$:

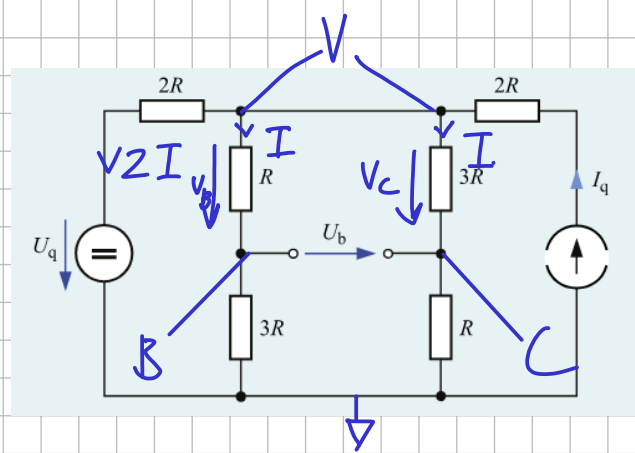
$$V_A = U_q \frac{R_2}{R_1 + R_2} \quad \text{where } R_2 = 2R, R_1 = 2R$$

$$= U_q \frac{2R}{4R} = \frac{U_q}{2}$$

$$V_B = \frac{U_q}{2} \frac{3R}{4R} = \frac{3U_q}{8}$$

$$V_C = \frac{U_q}{2} \frac{R}{4R} = \frac{U_q}{8}$$

$$\therefore U_b = \frac{2U_q}{8}$$



Set $U_q \rightarrow 0$:

$$I = \frac{I_q}{4}$$

$$V_B = \frac{I_q R}{4} \quad V_C = \frac{3I_q R}{4}$$

$$U_b = I_q R \left(\frac{3}{4} - \frac{1}{4} \right) = \frac{I_q R}{2}$$

$$U_b = \frac{U_q}{4} + \frac{I_q R}{2} = 118.2V$$