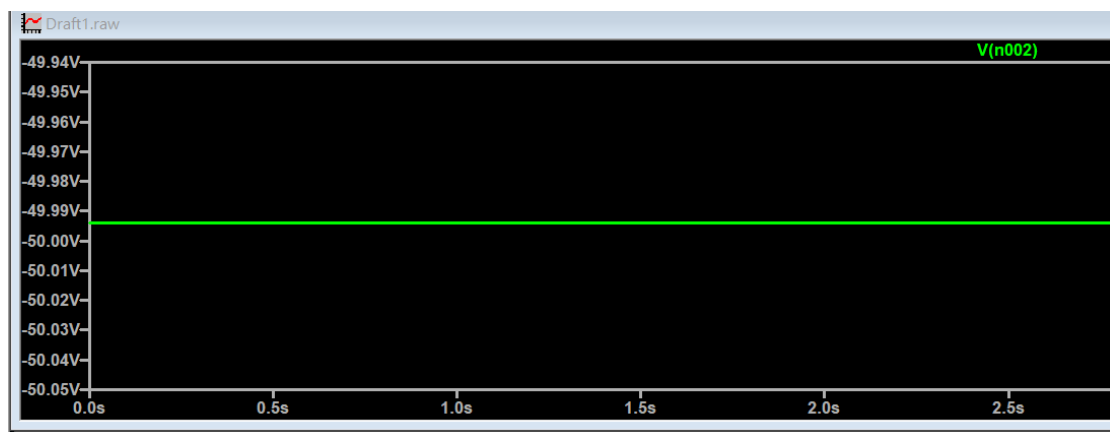
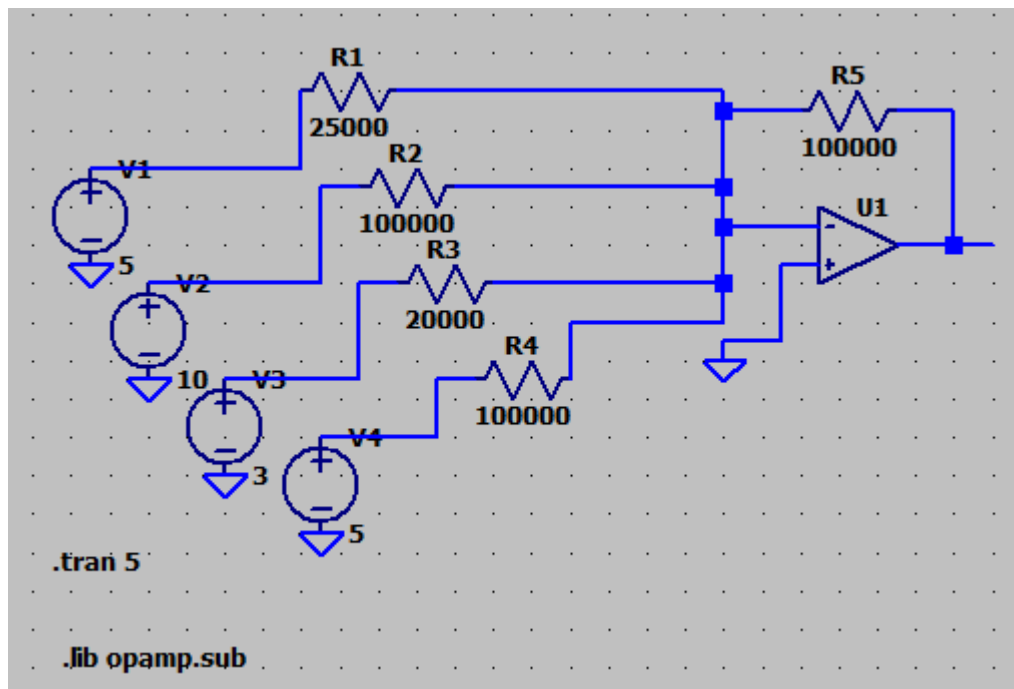


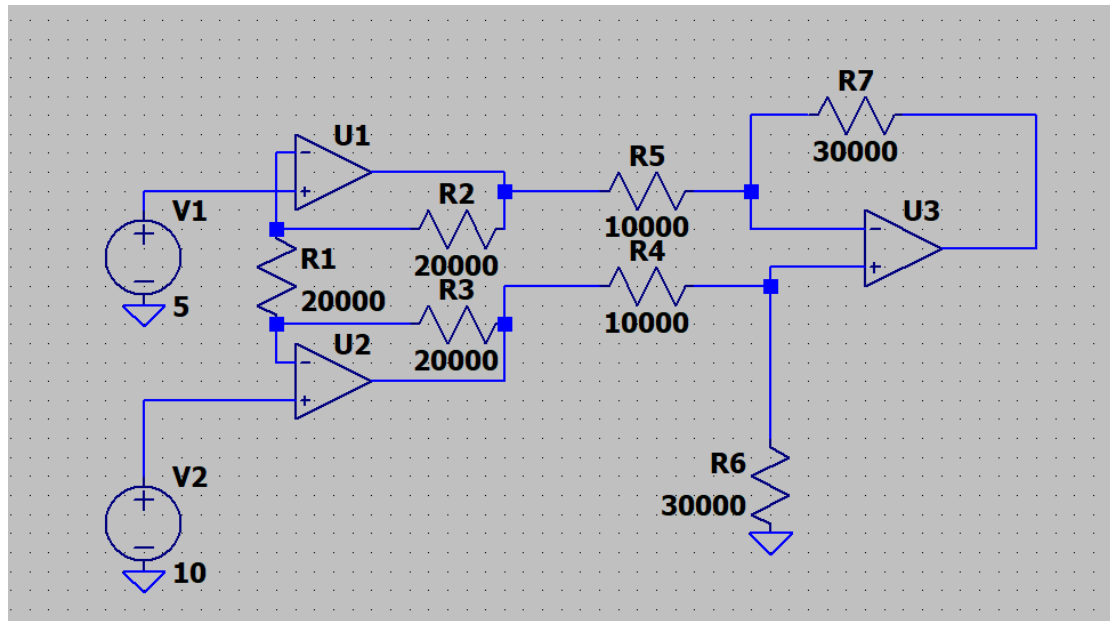
第一題



$$\left(\frac{V_1}{R_1} + \frac{V_2}{R_2} + \frac{V_3}{R_3} + \frac{V_4}{R_4} \right) \times (-R_5) = V_o$$

逼近-50 伏特，符合理論值

第二題



理論值計算 A_d 趨近於 9， V_o 趨近於 45(v)

$$V_{i1} = 5V, V_{i2} = 10V, V_d = 5V$$

$$\text{目標 } V_o = A_d V_d = 50V$$

$$V_{o,A1} = 5 - \left(\frac{5}{2R_1} \times R_2 \right)$$

$$V_{o,A2} = 10 + \left(\frac{5}{2R_1} \times R_2 \right)$$

$$V_{o,A2} - \left[\frac{V_{o,A1} - \left(\frac{R_4}{R_3 + R_4} \right) V_{o,A2}}{R_3} \right] \times R_4$$

$$= V_o = 50V$$

$$\text{let } R_1 = 10k\Omega, R_2 = 20k\Omega$$

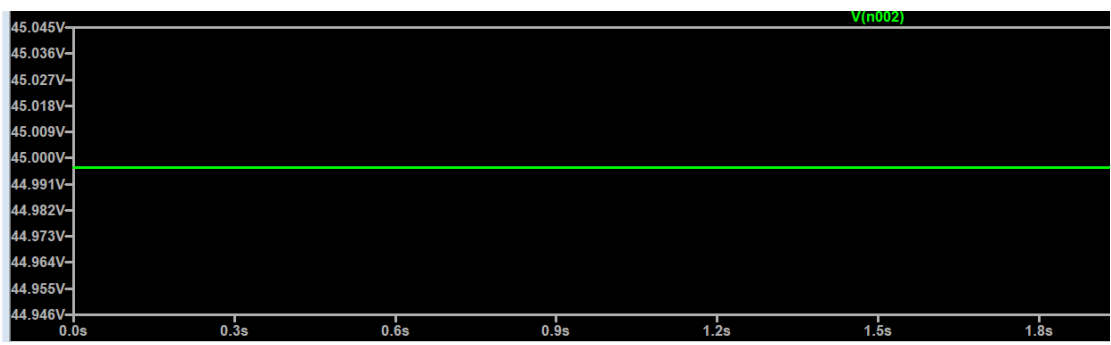
$$V_{o,A1} = 0(V), V_{o,A2} = 15(V)$$

$$\text{let } R_4 = 30k\Omega$$

$$aR_3 + bR_3 - c = 0$$

$$R_3 = 9.98k\Omega \approx 10k\Omega$$

$$V_o \text{ 趨近 } 45(V), A \approx 9$$



符合理論值