Week 8 Assignment B

Common mode rejection

1. Sketch the output voltage across the opamp when the input voltage is zero.

2. The voltage at node X is given by the expression \( V_X = \frac{R_2}{R_1 + R_2} \times V_{in} \).

3. The gain of the circuit is given by the expression \( G = \frac{R_2}{R_1} \).

4. The output voltage at node Y is given by the expression \( V_Y = V_{in} \).

5. The output voltage at node Z is given by the expression \( V_Z = \frac{R_2}{R_1} \times V_{in} \).

6. The output voltage at node W is given by the expression \( V_W = \frac{R_2}{R_1} \times V_{in} \).

7. The output voltage at node U is given by the expression \( V_U = \frac{R_2}{R_1} \times V_{in} \).

8. The output voltage at node V is given by the expression \( V_V = \frac{R_2}{R_1} \times V_{in} \).

9. The output voltage at node T is given by the expression \( V_T = \frac{R_2}{R_1} \times V_{in} \).

10. The output voltage at node S is given by the expression \( V_S = \frac{R_2}{R_1} \times V_{in} \).

11. The output voltage at node R is given by the expression \( V_R = \frac{R_2}{R_1} \times V_{in} \).

12. The output voltage at node Q is given by the expression \( V_Q = \frac{R_2}{R_1} \times V_{in} \).

13. The output voltage at node P is given by the expression \( V_P = \frac{R_2}{R_1} \times V_{in} \).

14. The output voltage at node N is given by the expression \( V_N = \frac{R_2}{R_1} \times V_{in} \).

15. The output voltage at node M is given by the expression \( V_M = \frac{R_2}{R_1} \times V_{in} \).

16. The output voltage at node L is given by the expression \( V_L = \frac{R_2}{R_1} \times V_{in} \).

17. The output voltage at node K is given by the expression \( V_K = \frac{R_2}{R_1} \times V_{in} \).

18. The output voltage at node J is given by the expression \( V_J = \frac{R_2}{R_1} \times V_{in} \).

19. The output voltage at node I is given by the expression \( V_I = \frac{R_2}{R_1} \times V_{in} \).

20. The output voltage at node H is given by the expression \( V_H = \frac{R_2}{R_1} \times V_{in} \).

21. The output voltage at node G is given by the expression \( V_G = \frac{R_2}{R_1} \times V_{in} \).

22. The output voltage at node F is given by the expression \( V_F = \frac{R_2}{R_1} \times V_{in} \).

23. The output voltage at node E is given by the expression \( V_E = \frac{R_2}{R_1} \times V_{in} \).

24. The output voltage at node D is given by the expression \( V_D = \frac{R_2}{R_1} \times V_{in} \).

25. The output voltage at node C is given by the expression \( V_C = \frac{R_2}{R_1} \times V_{in} \).

26. The output voltage at node B is given by the expression \( V_B = \frac{R_2}{R_1} \times V_{in} \).

27. The output voltage at node A is given by the expression \( V_A = \frac{R_2}{R_1} \times V_{in} \).

28. The output voltage at node Z is given by the expression \( V_Z = \frac{R_2}{R_1} \times V_{in} \).

29. The output voltage at node Y is given by the expression \( V_Y = \frac{R_2}{R_1} \times V_{in} \).

30. The output voltage at node X is given by the expression \( V_X = \frac{R_2}{R_1} \times V_{in} \).