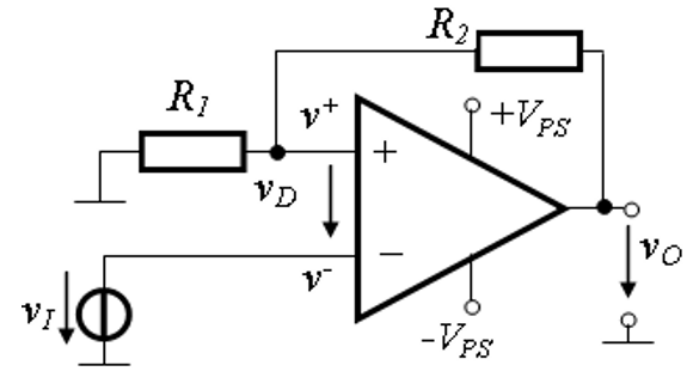


Homework 5 – Hysteresis comparators



$$R_1 = 3 \text{ k}\Omega, R_2 = 9 \text{ k}\Omega, V_{PS} = \pm 12 \text{ V}.$$

- Deduce and plot VTC $v_O(v_I)$. What is the application of the circuit?
- Compute the width of the hysteresis, ΔV_{Th} .
- Plot $v_I(t)$ and $v_O(t)$ for $v_I(t) = 8\sin 1000t$ [V], then for $v_I(t) = 2\sin 1000t$ [V].
- Modify the circuit so that $\Delta V_{Th} = 10$ V.