

Special Problem 2.8-1

The **input** to the circuit below is:

$$v_i(t) = 0.5 t^2 - 0.5$$

where time t is in **microseconds**.

The slew rate of the op-amp is $10 \text{ V}/\mu\text{sec}$.

The DC power supplies are $V^+ = 15 \text{ V}$ and $V^- = -15 \text{ V}$.

- 1) If $R_2 = 1 \text{ K}$, at what time t will the output signal $v_o(t)$ begin to distort?
- 2) If $R_2 = 9 \text{ K}$, at what time t will the output signal $v_o(t)$ begin to distort?

