Special Problem 2.8-5

The op-amp in the circuit below has a **slew rate** of 10 volts/μsec.

Its **output** voltage is **limited** to $-15 < v_O(t) < 15$ (otherwise the output **saturates**).

The **input** signal is:

$$v_i(t) = 0.25t^2 \quad \text{V}$$

where time t is in **microseconds**.

Determine the **time** t (in microseconds) when the output signal $v_O(t)$ begins to **distort** for **any reason**, if:

a) $R_2 = 3K$

b) $R_2 = 15K$