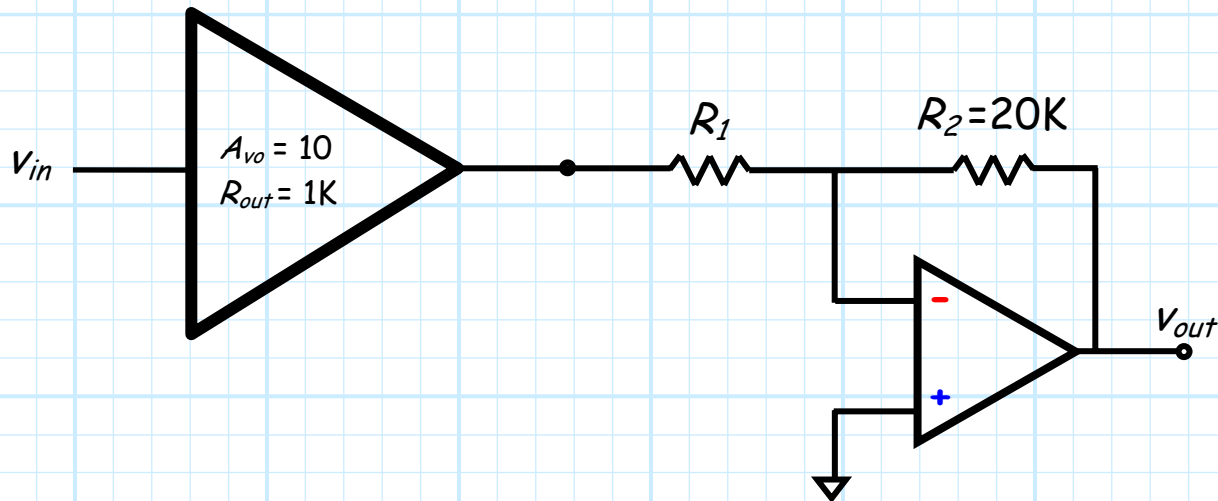


### Special Problem 2.3-2

An amplifier with an open-circuit **voltage gain** of  $A_{vo} = 10$  and an **output resistance** of  $R_{out} = 1\text{K}$  is connected in series to an **inverting amplifier**, as shown below.



Find the value of resistor  $R_1$  so that  $v_{out}/v_{in} = -100$ .