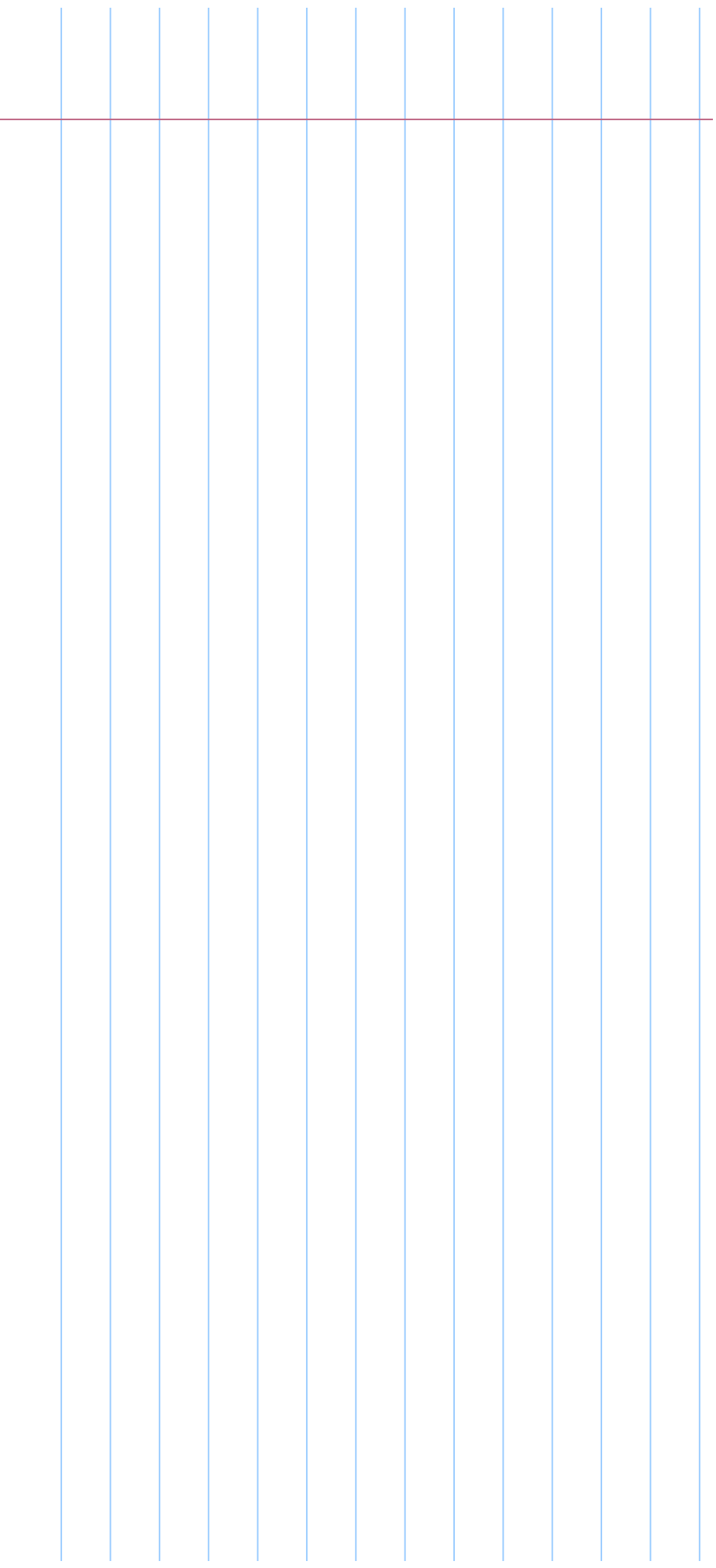


EE1001 Electrical and Magnetic Circuits

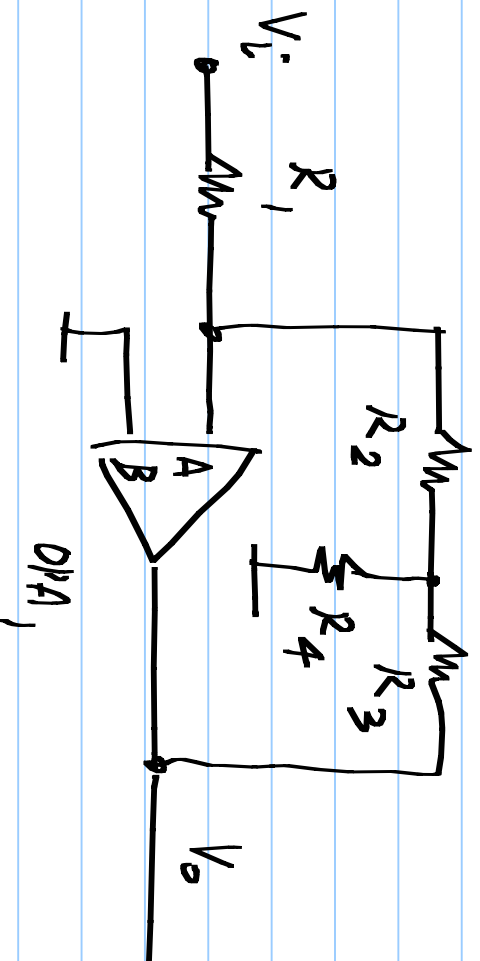
Problem set #6 (Due on 17th March 2015)



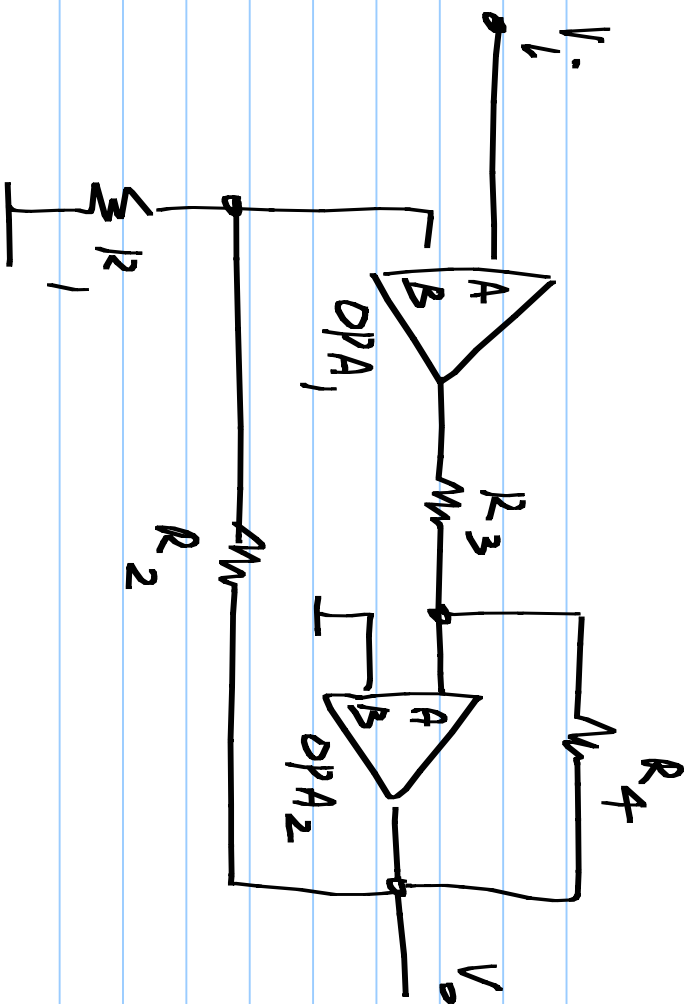
A series of 19 horizontal blue lines for writing, with a red horizontal line at the top of the lines.

P 1-4: Determine the output sign for negative feedback and calculate V_o/V_i or V_o/I_i .

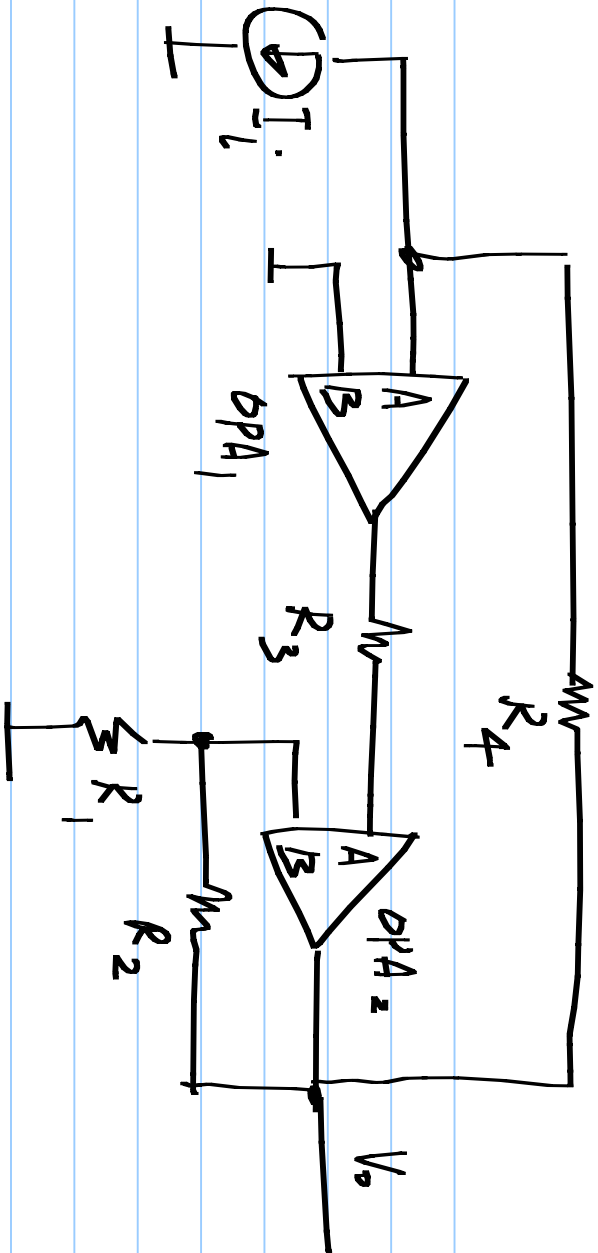
P1.



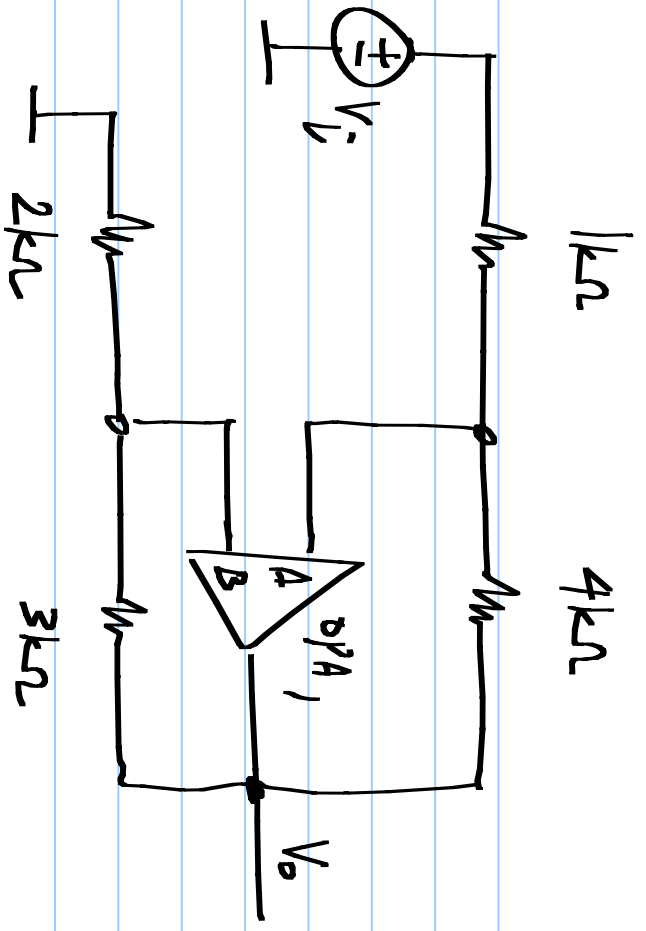
P2.



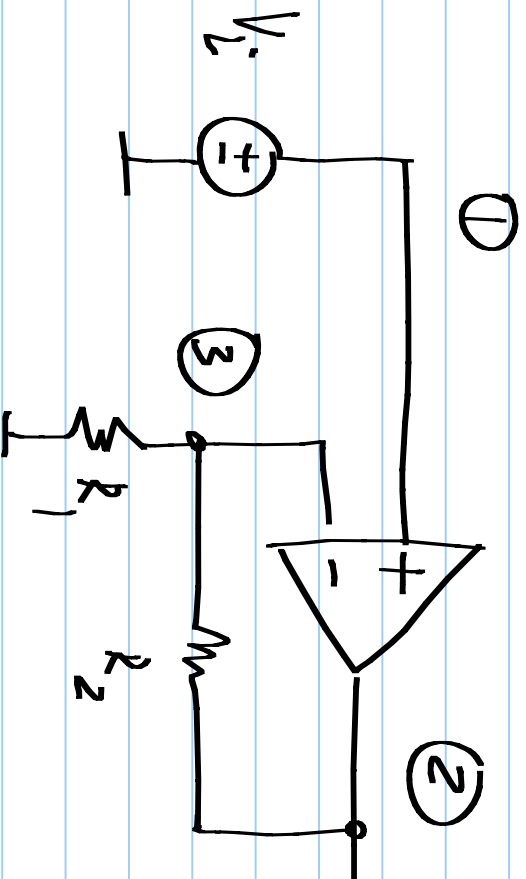
P3.

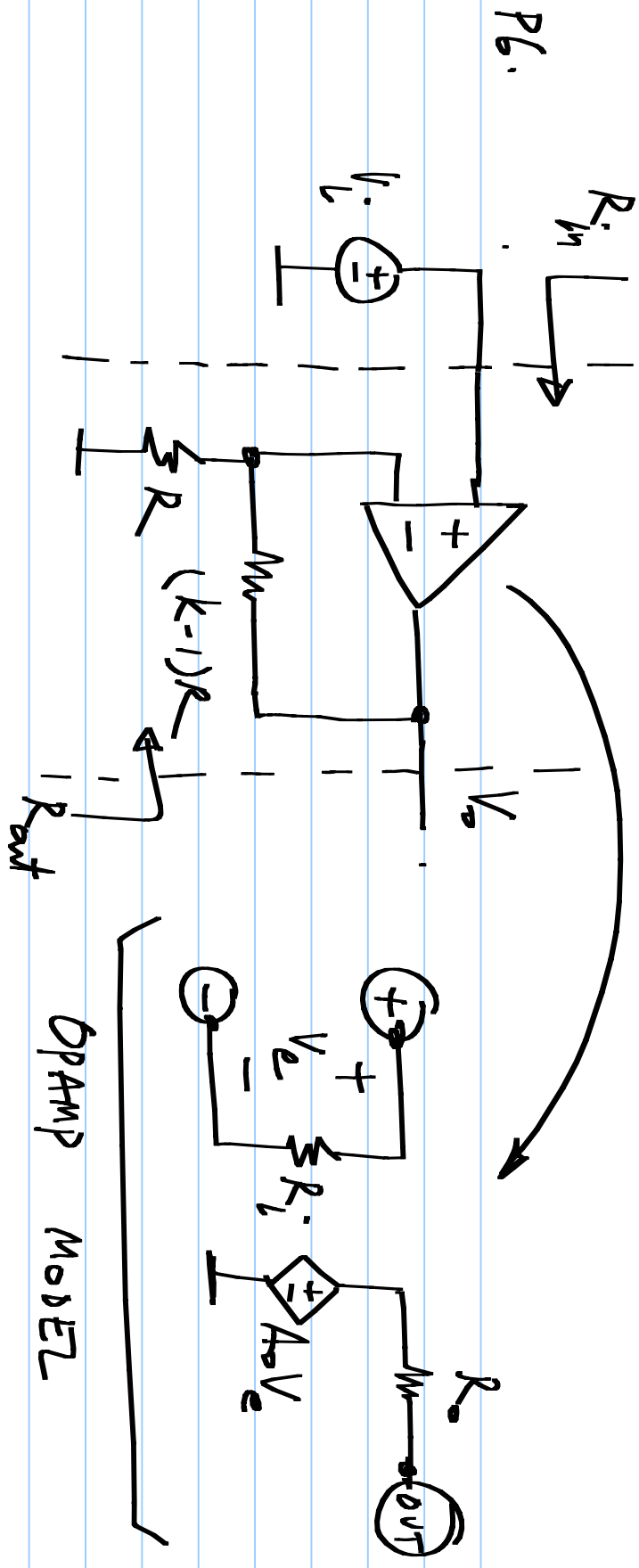


P4:



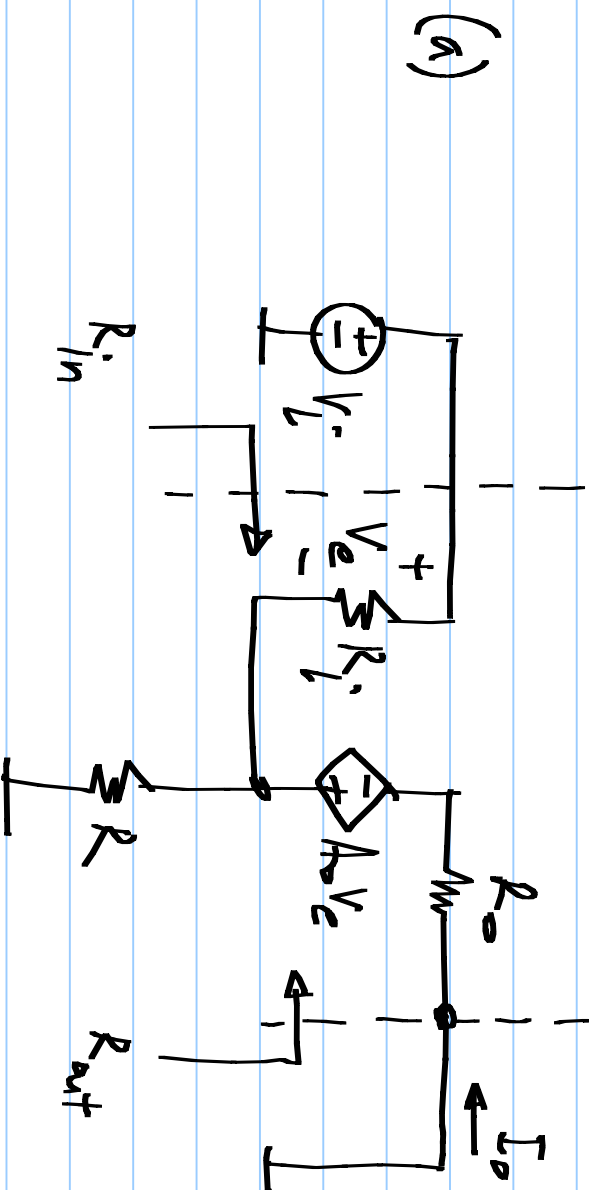
Q5. Write the modified nodal analysis equations for the following circuit-



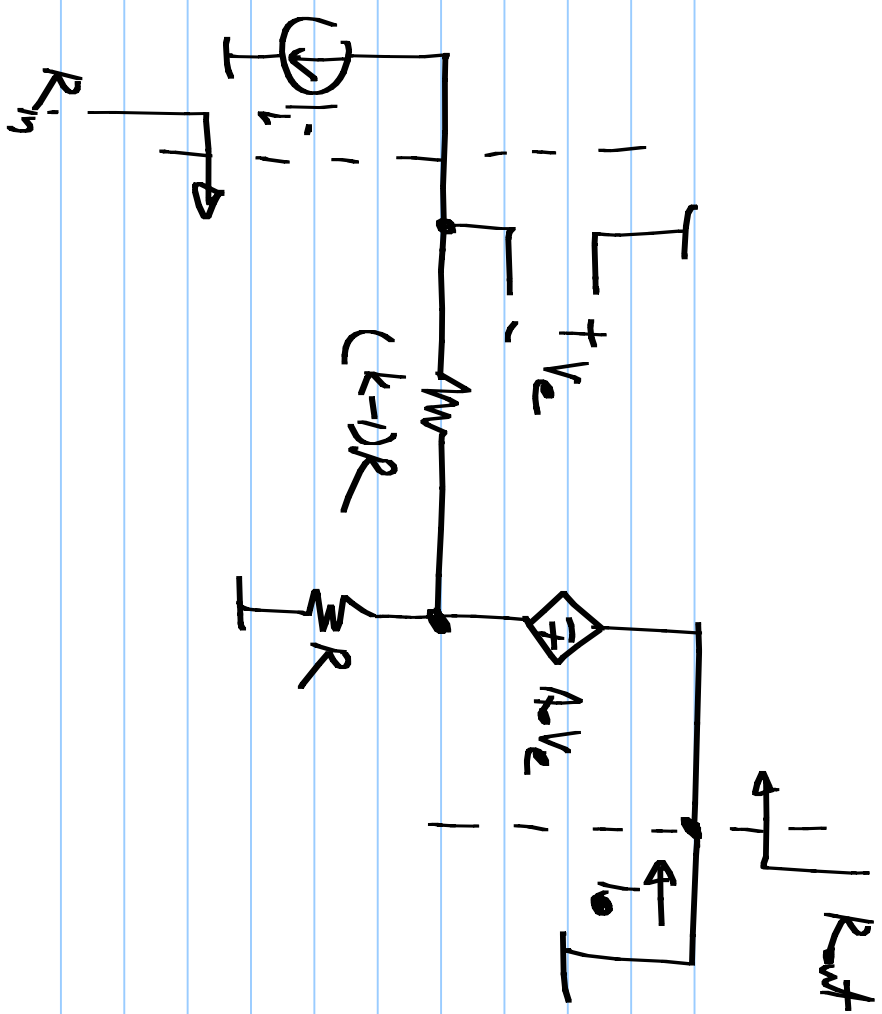


Determine V_o/V_i , R_{in} , R_{out} with the given opamp model.

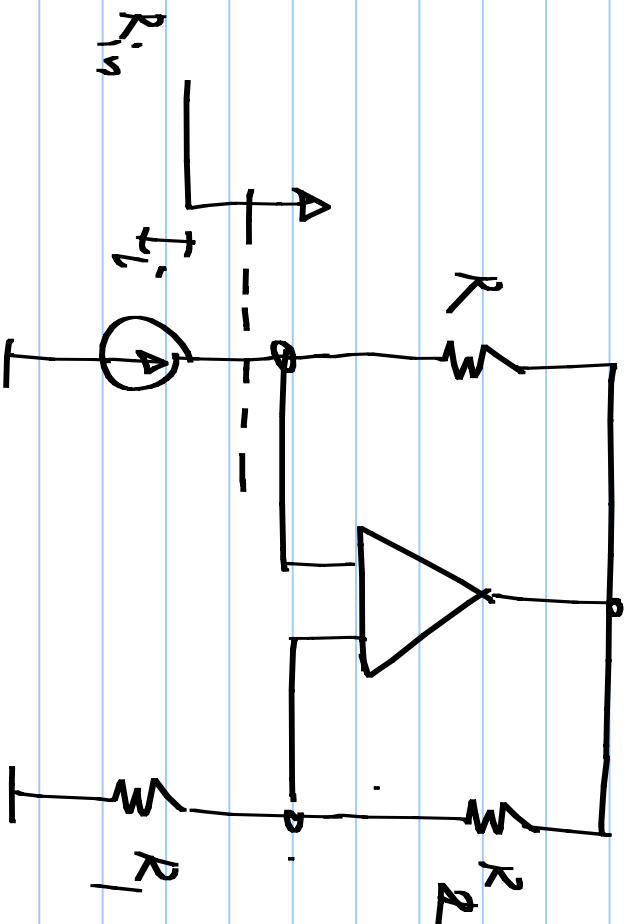
P7. Determine the output/input ratio, and the input and output resistances in the following circuits.
 What happens as $A_v \rightarrow \infty$



P7 (b)



P8.



Determine the
opamp signs for
negative feedback.
Determine R_{in} , the
resistance seen by
the current source.