EC 1010: Electrical and Magnetic circuits.

Note Title 1/28/2013

Problem set #4 (Due on 23 Mar. 2013)

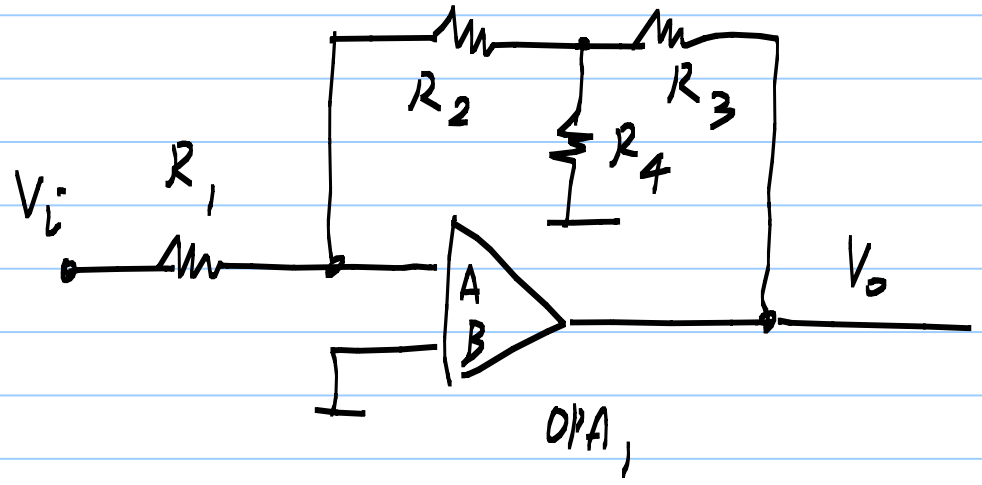
HKD: Hayt, Kemmerly, and Durbin

Engineering circuit analysis, 7th Edition

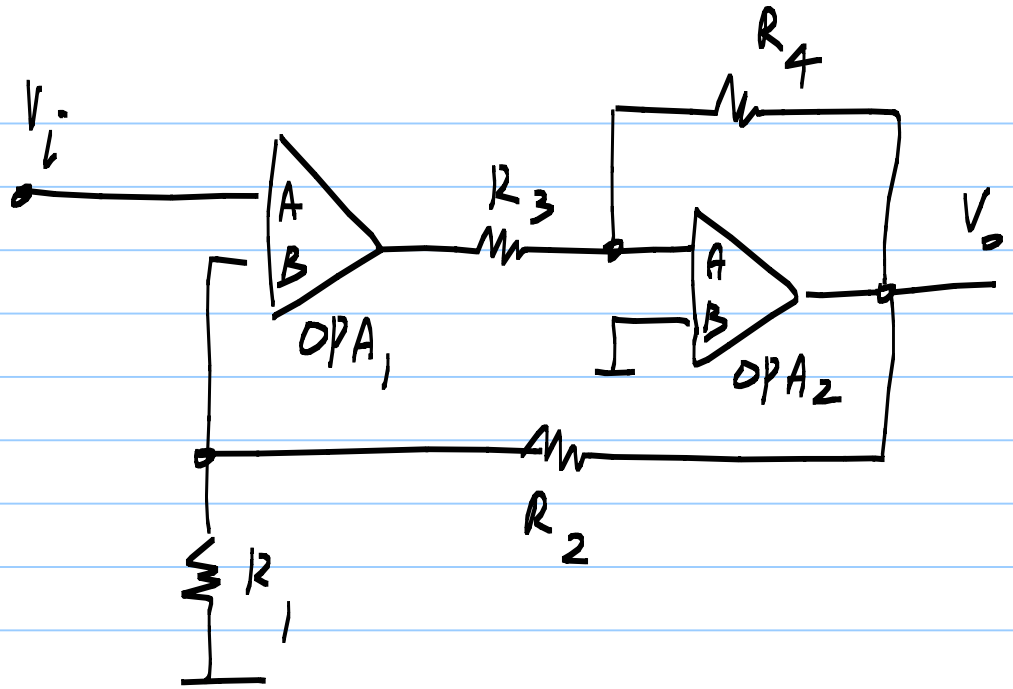
Tata McGraw Hill 2010, 2006

P 1-4 : Determine the opamp signs for negative feedback and calculate V_o/V_i or V_o/I_i

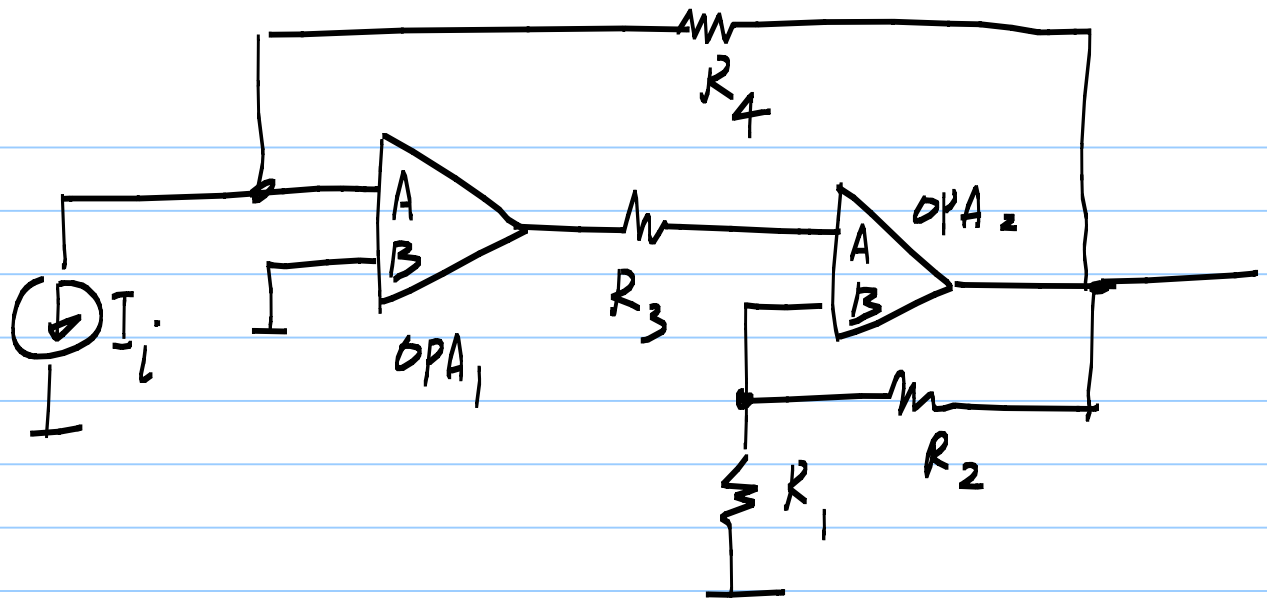
P1.



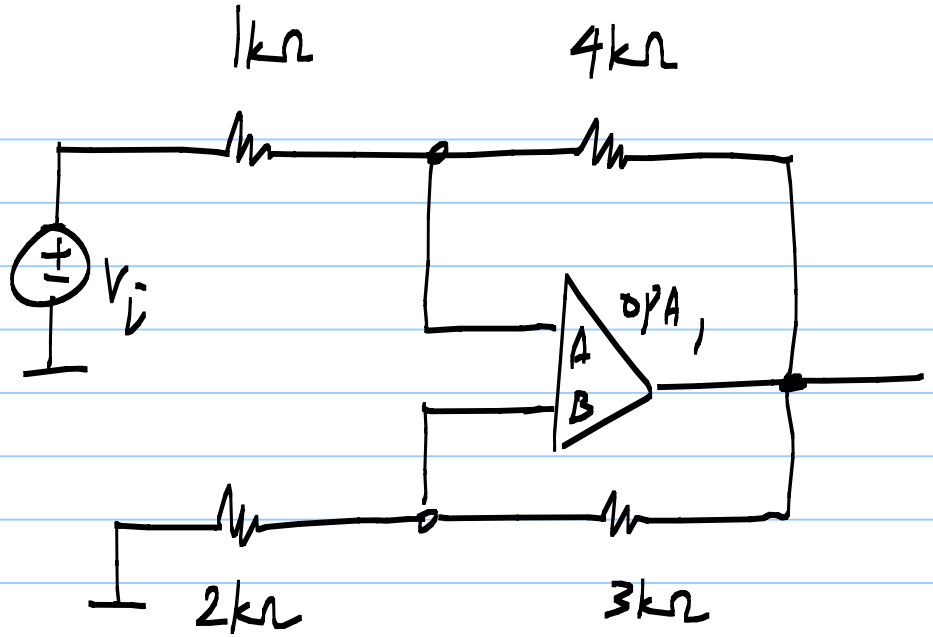
P2.



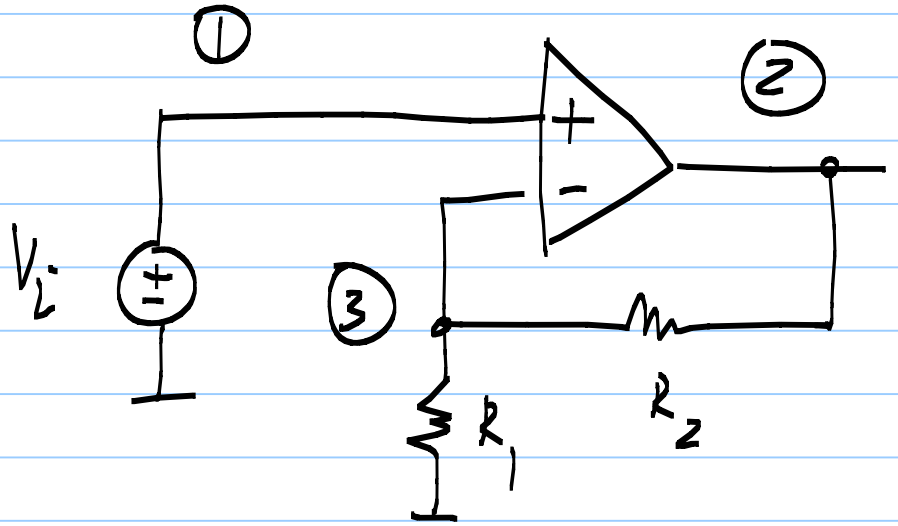
P3.



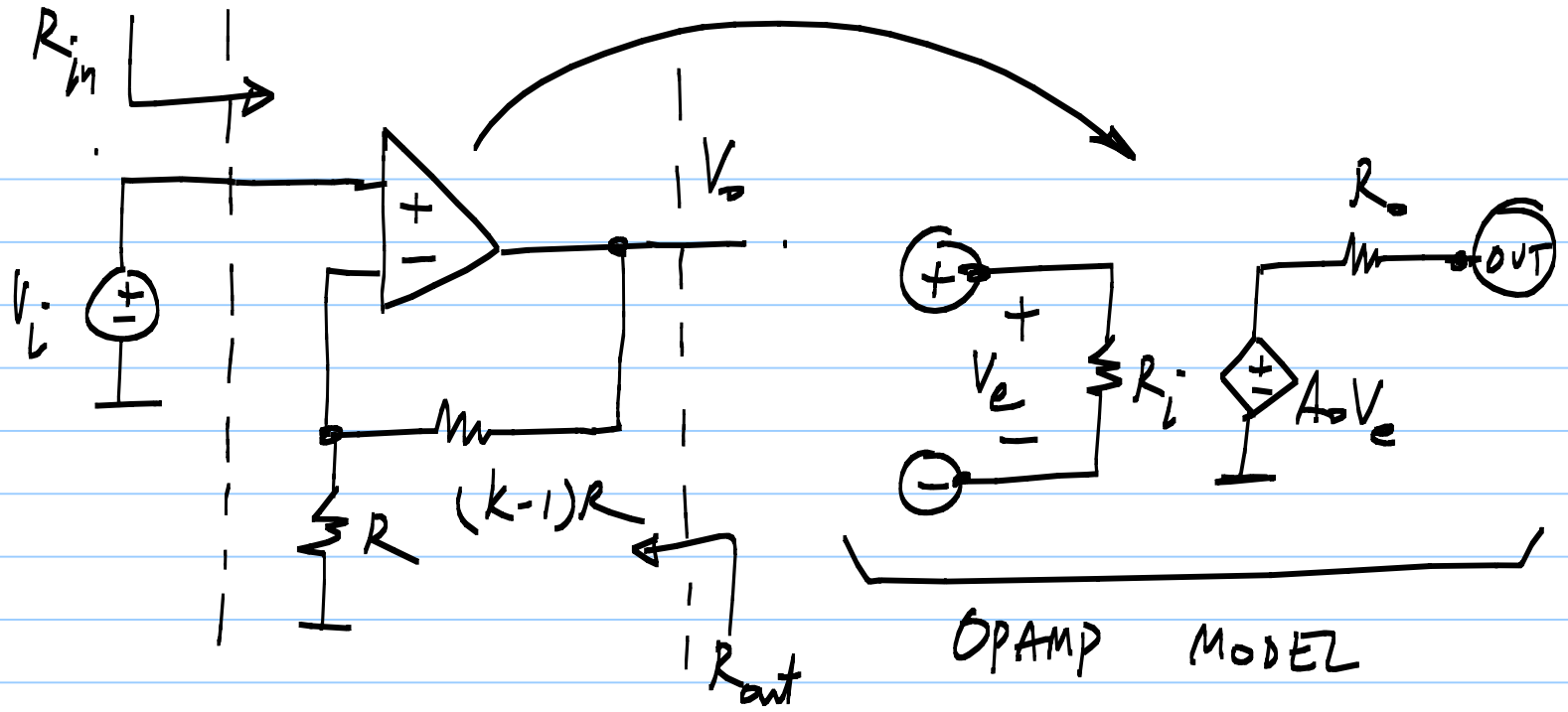
P4:



P5. Write the modified nodal analysis equations for the following circuit



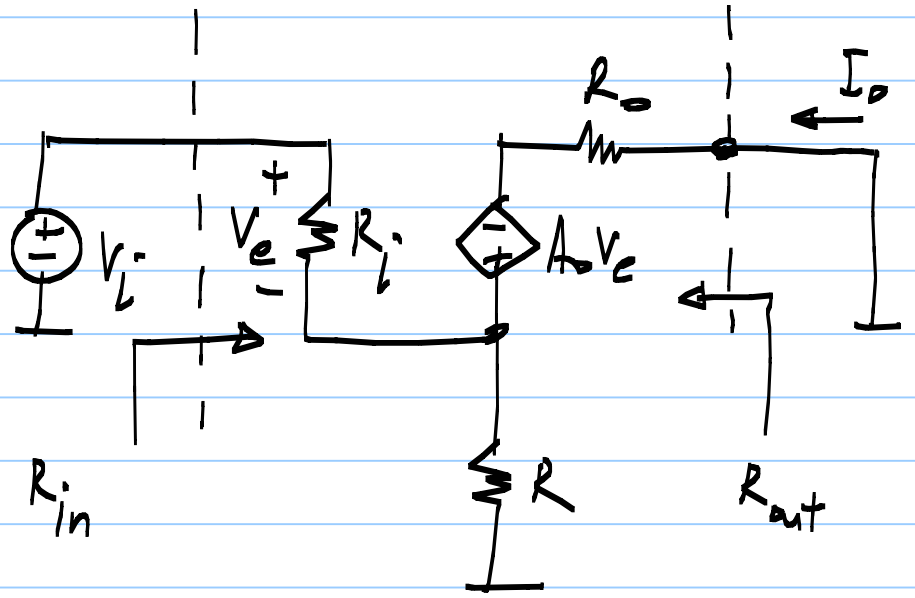
P6.



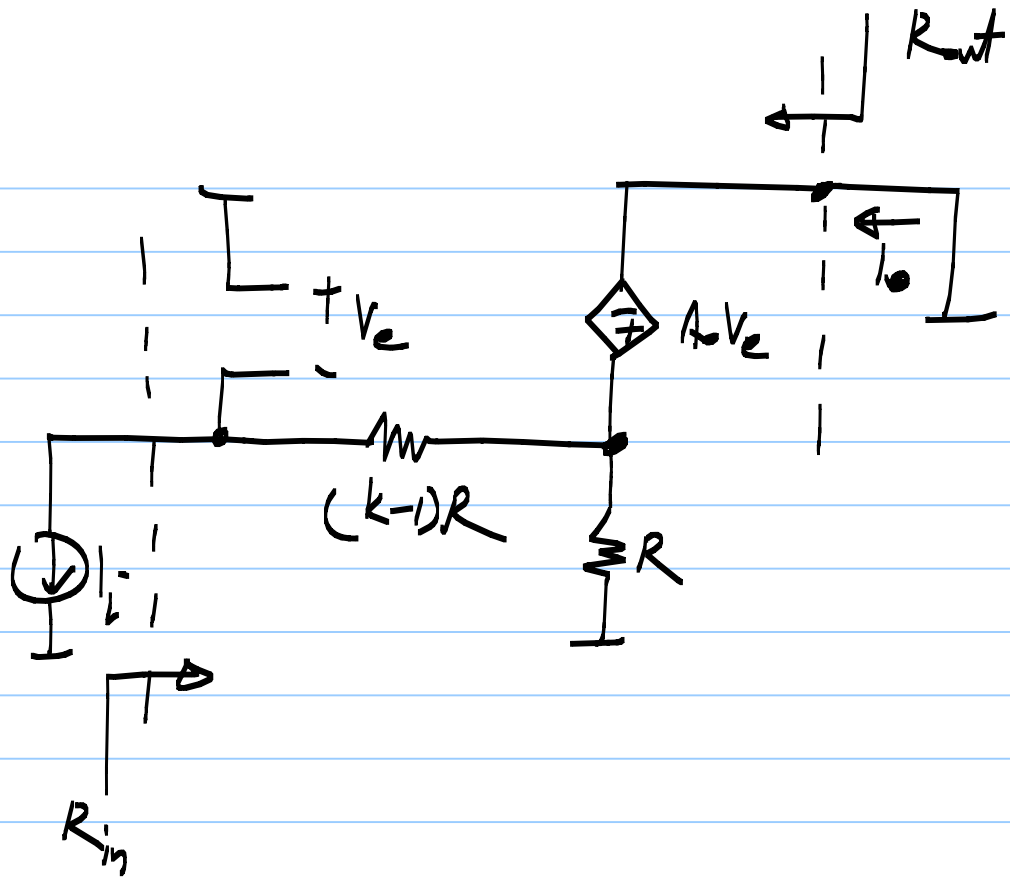
Determine V_o/V_i, R_{in}, R_{out} with the given opamp model.

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

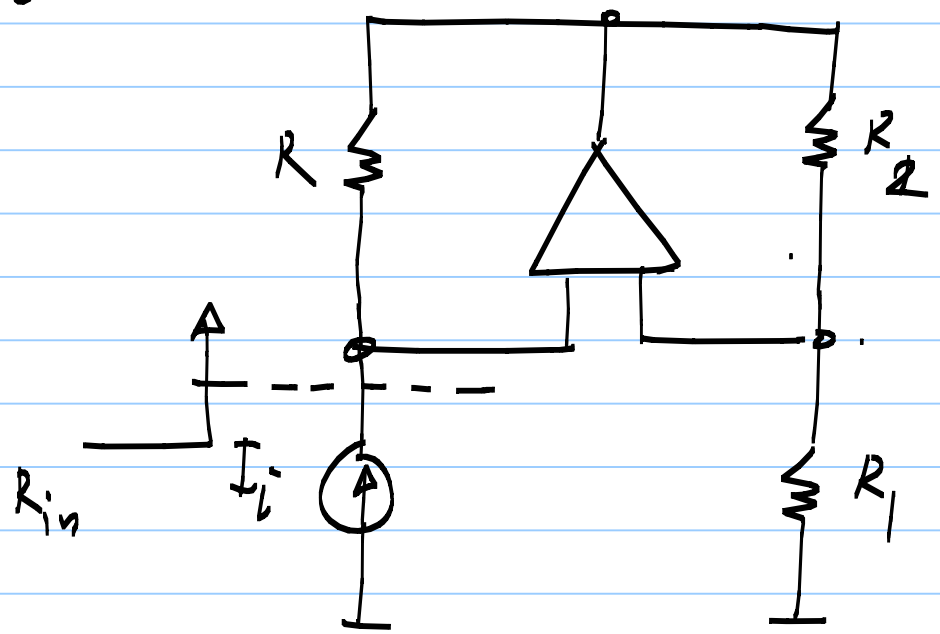
(a)



(b)



P8.



Determine the opamp signs for negative feedback.

Determine R_{in}, the resistance seen by the current source.