

NANYANG TECHNOLOGICAL UNIVERSITY SCHOOL OF
ELECTRICAL & ELECTRONIC ENGINEERING

ACADEMIC YEAR 2020-2021
SEMESTER 2

EE3019 INTEGRATED ELECTRONICS

TUTORIAL 7

-
1. For the circuit shown in Figure 7.1, use the feedback method to find the voltage gain V_o/V_s , the input resistance R_{in} and the output resistance R_{out} . Given that the op-amp has open-loop gain $\mu = 10^4 \text{ V/V}$, $R_{id} = 100 \text{ k}\Omega$, and $r_o = 1 \text{ k}\Omega$.

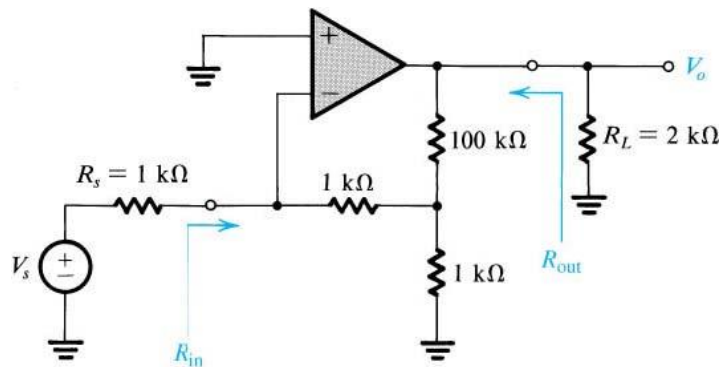


Figure 7.1

[Answer: -192 V/V , 29.9Ω , 29.5Ω]