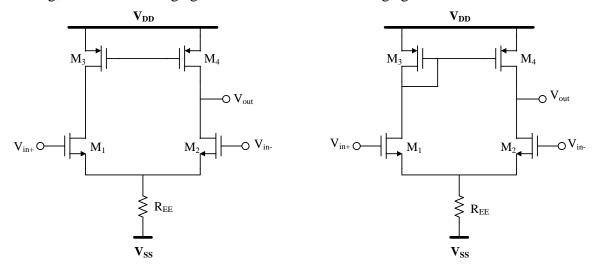
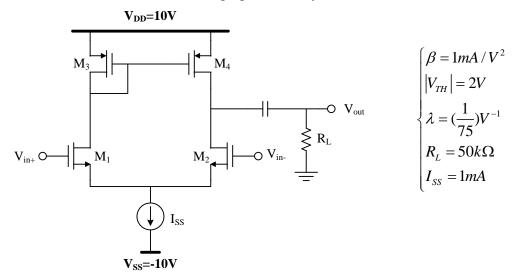
1- Compare the following circuits in terms of input DC common-mode range, output voltage swing, differential voltage gain and common-mode voltage gain.



- 2- In the following circuit, the specifications of the transistors are the same.
  - a) Calculate the differential voltage gain directly. Discuss about the result.
  - b) Determine the common-mode voltage gain directly. Discuss about the result.



3- In the following circuit, determine the CMRR and input differential resistance.

