

**Special Problem 6.2-1**

For the differential amplifier below, the DC bias voltage  $V_{BB}$  is set so that each BJT is in the **active** region.

The BJTs are **identical**, with  $\beta = 100$ .

Determine the **small signal differential gain**  $A_d = v_{o1}/v_d$  of this amplifier, where  $v_d = v_1 - v_2$ .



