1) A 2-bit flash Analog to Digital Converter (ADC) is given in Fig. **??**. The input is $0 \leq V_{IN} \leq 3$ Volts. The expression of the LSB of the output B_0 as a boolean function of $X_2, X_1,$ and X_0 is
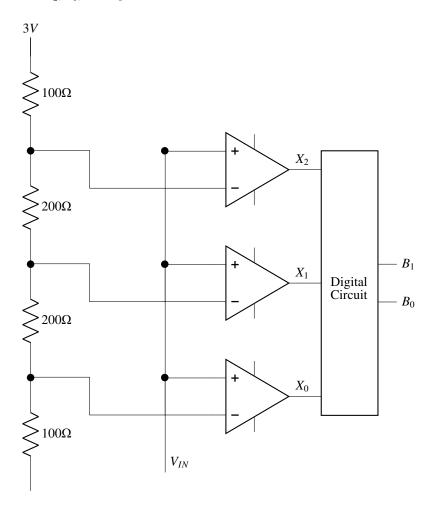

Fig. 1.

a) $X_0 \overline{\left[X_2 \oplus X_1\right]}$

b) $\overline{X_0} \overline{\left[X_2 \oplus X_1\right]}$

c) $X_0 \left[X_2 \oplus X_1\right]$

d) $\overline{X_0} \left[X_2 \oplus X_1\right]$