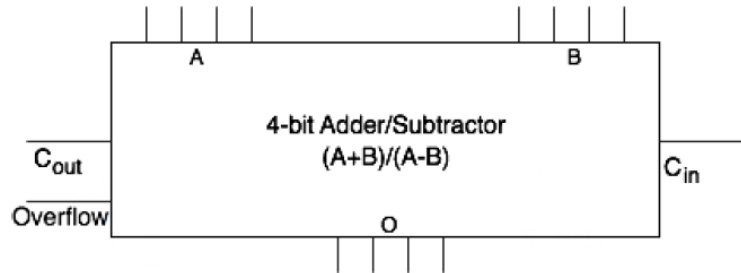


KFUPM - ELECTRICAL ENGINEERING DEPARTMENT**EE-200 – Digital Logic Circuit Design (section 05) – Quiz04****Student Name:****Student Number:****Problem (25 points):**

Using only *the least number* of 4-bit adder/subtractor blocks shown below and any of 2-input gates (*if needed*), design a circuit that takes a 4-bit number x and calculates the absolute value $|5-x|$ where $|A|=A$ if $A \geq 0$, and $|A|=-A$ if $A < 0$. Numbers provided are **binary in 2's complement representation**. Cross (\times) any input/output that should be ignored.



Functional block to use in design.

