1. Which statement are Ture or False? If it false please explain why.
2. Let A=51(10) , B = -77(10) ,use 8 bits 2’s complement to computer A-B, and it occurs overflow.
3. In ALU control (ALUop), the first two bits is to control whether the input A, B to do inverter.
4. Some high level languages will ignore overflow. In this situation, MIPS used add, addi, sub instructions to ignore overflow.
5. We can use logic gate **xor** and input **CarryIn CarryOut** to confirm whether overflow occurs in 1-bit ALU, if xor output is 1, it occurs overflow.

Ans：F:no overflow, 8 bits 2’s complement is -128~127

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F: Use addu, addui, subu instructions

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2. Which of the following calculation are overflow? If it overflow please explain why.

a. Assume 185 and 122 are unsigned 8-bit decimal integers. Calculate 185–122.

b. Assume 185 and 122 are signed 8-bit decimal integers stored in sign-magnitude format. Calculate 185 +122.

c. Assume 185 and 122 are signed 8-bit decimal integers stored in sign-magnitude format. Calculate 185 −122.

Ans

C is overflow. The result is -179, which cannot be represented by an 8-bit sign-magnitude format.