Tests & Quizzes

Quiz 05

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Part 1 of 2 / 10.0 Points

You are provided with two of *two's complement 6-bit* binary numbers, A and B.

Evaluate (-A + B) using the *two's complement 6-bit number system*.

If the result is encoded in less than 6 bits (including the sign bit), you need to extend it to fill the entire 6 bits.
If your answer is less than 6 bits or more than 6 bits, you will get zero.

You need to provide the entire 6-bit result, even if an overflow occurred.
You MUST report the answer in two's complement.

After calculating the result, state the values of the Z, N, V, and C flags.

Question 1 of 2 10.0 Points

Click to see additional instructions
When A = 101110 and B = 001111, the value of (-A + B) = ✖ 111101 , the Z flag = ✔ 0 , the N flag = ✔ 1 , the V flag = ✔ 1 , and the C flag = ✔ 0

Answer Key: 100001, 0, 1, 1, 0

Part 2 of 2 / 10.0 Points

Answer the following question without using a computer, i.e., by converting the hexadecimal numbers into binary and doing the addition operation to get the flags' value. When you report the sum value, you need to report it in hexadecimal.

Question 2 of 2 10.0 Points

After executing the following three ARM instructions
MOV r0, #0xFFFFFFF8
MOV r1, #0xFFFFFFF8
ADDS r2, r1, r0

The value of r2 = 0x ✔ FFFFFFF0 , the Z flag = ✔ 0 , the N flag = ✔ 1 , the V flag = ✖ 1 , and the C flag = ✔ 1 .

Answer Key: FFFFFFF0, 0, 1, 0, 1