Answer Key: -2.0625

Part 11 of 11 / 4.0 Points

In this question, you are provided with two _unsigned_ binary numbers, A and B.

You are asked to evaluate (-A - B) as well as (-A + B) using the _two's complement 12-bit number system_.

If the result is encoded in <u>less</u> than 12 bits (including the sign bit), you need to <u>extend</u> it to fill the entire 12 bits.
If your answer is less than 12 bits or more than 12 bits, you will get zero.

Indicate if an overflow occurred or not.

N.B.: You need to <u>provide the entire 12-bit result, even if an overflow occurs</u>.

You MUST report the answer in 2's complement.

Do *NOT* convert the number back from the 2's complement.
Leave it in the 2's complement representation.

Question 11 of 12 [＿＿＿＿＿＿] 2.0 Points

When A = 10001110001 and B = 110011101,

the value of (-A - B) = ✔ <u>100111110010</u> , If an overflow occurred during evaluating this expression, type yes, if not type no ✖ <u>yes</u> ; and

the value of (-A + B) = ✔ <u>110100101100</u> , If an overflow occurred during evaluating this expression, type yes, if not type no ✔ <u>no</u>

Answer Key: 100111110010, N|NO|No|no, 110100101100, N|NO|No|no

Question 12 of 12 [＿＿＿＿＿＿] 2.0 Points

When A = 10111101011 and B = 10100010000,

$-A-B = (1) \, 010111111011_2$ 2's complement.

the value of (-A - B) = ✖ <u>10100000101</u> , If an overflow occurred during evaluating this expression, type yes, if not type no ✖ <u>no</u> ; and

the value of (-A + B) = ✖ <u>11100100101</u> , If an overflow occurred during evaluating this expression, type yes, if not type no ✔ <u>no</u>

Answer Key: 010100000101, Y|Yes|yes|YES, 111100100101, N|NO|No|no