

HW1.2. Change of Base (Randomized)

For the following problems, do not include prefixes (ex. 0b, 0x)

*Hint: This problem can be approached in two ways:*

1) Convert the number into base-10 (decimal) then convert the number again to the desired number representation. This can be, however, a tedious approach.

2) Leverage the fact that base-8 (octal) representation is a grouping of base-2 (binary) bits in chunks of 3 (since  $2^3 = 8$ ) starting from the rightmost set of bits, also called the least significant bit (LSB), and base-16 (hexadecimal) representation is a grouping of binary bits in chunks of 4 (since  $2^4 = 16$ ) starting from the LSB.

Q1.1: What is  $101111000001_2$  in base 8?

?

Q1.2: What is  $111100110111_2$  in base 16?

?

Q1.3: What is  $5603_8$  in base 2?

?

Save & Grade20 attempts left

Save only

Additional attempts available with new variants?

Homework 1

Assessment overview

Total points:

100/100

Score:

100%

Question

Value:

12

History:

12

Awarded points:

12/12

Report an error in this question

Previous question

Next question

Attached files

No attached files

Attach a file

Attach text