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?

5701

2^n: 1 2 4 8

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

F37

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

101 130 000 011

101 110 000 011

Save & Grade *20 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